Base Load Power Hub (BLPH)

MATERIAL TRACEABILITY AND CERTIFICATES STRUCTURE

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Rev.	Date	Description	Prepared	Reviewed	Approved

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Revision / Change Log

Rev.	Description
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01	Issue for Information (IFI): the structural category 5 material list has been added.

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1 INTRODUCTION AND INSTRUCTIONS FOR USE

This dossier collects the material certificates related to the structural components supplied for the BLPH project. It has been structured to facilitate both systematic consultation and targeted searches.

The documentation is primarily organized by Purchase Order (PO), which are reflected as bookmarks within the file. Each bookmark provides direct access to the corresponding set of material certificates.

In some cases, a single Purchase Order is subdivided into multiple sub-dossiers. This occurs when materials under the same order have been delivered in different batches. Each sub-dossier is identified by a unique internal reference code, allowing clear traceability of the supplied items.

For ease of navigation, a traceability file is provided at the beginning of the dossier. This document also serves as an index and links key information—such as heat numbers—to the relevant material certificates. By searching for a specific heat number within this file, users can quickly locate the corresponding certificate within the dossier.

In addition, the entire dossier is fully searchable. This allows users to retrieve documents using any relevant search criteria (e.g. heat number, certificate number, material grade), providing flexibility in how the information is accessed.

Please note that traceability requirements do not apply to structural category 5 materials. These items are listed in the attachment provided at the end of this document.

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2 MATERIAL TRACEABILITY REPORT

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-SK-011	00	CWLPL001	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL002	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL003	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL004	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL005	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL006	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL007	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL008	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL009	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL010	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL011	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL012	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL013	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
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123A90-SK-011	00	CWLPL016	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL017	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-011	00	CWLPL018	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL001	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL002	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL003	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL004	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL005	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL006	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL007	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL008	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL009	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL010	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL011	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL012	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL013	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
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123A90-SK-012	00	CWUPL015	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL016	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
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123A90-SK-012	00	CWUPL018	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL019	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-012	00	CWUPL020	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
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123A90-SK-012	00	CWUPL022	001	1	PL12x240	S355	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-SK-032	00	CWLWN001	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	290963		1724001716	00030	3.377		
123A90-SK-032	00	CWLWN002	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	456878		1724001716	00030	3.377		
123A90-SK-032	00	CWLWN003	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	295027		1724001716	00040	3.377		
123A90-SK-032	00	CWLWN004	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	248307		1724001716	00020	3.377		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-SK-032	00	CWLWN005	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	248307		1724001716	00020	3.377		
123A90-SK-032	00	CWLWN006	001	1	LWN 1" FF 150LB ASME	A/SA350Gr. LF2	248307		1724001716	00010	3.377		
123A90-FDL-ST-DD-90000	01	CWLPG001	001	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90000	01	CWLPG001	002	1	PL15x960	S420MLO	760420	211441/1	1723001495	00040	A0377578	**T50**	
123A90-FDL-ST-DD-90000	01	CWLPG001	029	3	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90000	00	CWLPG001	058	1	PL10x107,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90001	01	CWLPG002	001	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90001	01	CWLPG002	002	1	PL15x960	S420MLO	760420	211441/1	1723001495	00040	A0377578	**T50**	
123A90-FDL-ST-DD-90001	01	CWLPG002	029	2	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90002	00	CWLPG003	001	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90002	00	CWLPG003	002	1	PL15x960	S420MLO	760420	211441/1	1723001495	00040	A0377578	**T50**	
123A90-FDL-ST-DD-90002	00	CWLPG003	029	2	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90003	00	CWLPG004	001	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90003	00	CWLPG004	002	1	PL15x960	S420MLO	760420	211441/1	1723001495	00040	A0377578	**T50**	
123A90-FDL-ST-DD-90003	00	CWLPG004	029	2	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90003	00	CWLPG004	034	1	PL12x107,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90004	01	CWLPG005	005	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90004	01	CWLPG005	007	1	PL15x950	S420MLO	760333	212992/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90005	01	CWLPG006	006	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90005	01	CWLPG006	008	1	PL15x950	S420MLO	760425	214400/2	1723001495	00040	A0377578	**T25**	
123A90-FDL-ST-DD-90006	01	CWLPG007	009	2	PL25x400	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90006	01	CWLPG007	010	1	PL15x950	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90007	01	CWLPG008	009	2	PL25x400	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90007	01	CWLPG008	010	1	PL15x950	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90007	01	CWLPG008	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90008	01	CWLPG009	009	2	PL25x400	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90008	01	CWLPG009	010	1	PL15x950	S420MLO	760420	211440/2	1723001495	00040	A0377515	**T18**	
123A90-FDL-ST-DD-90008	01	CWLPG009	032	2	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90009	01	CWLPG010	009	2	PL25x400	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90009	01	CWLPG010	010	1	PL15x950	S420MLO	760420	211440/2	1723001495	00040	A0377515	**T18**	
123A90-FDL-ST-DD-90009	01	CWLPG010	032	2	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90010	00	CWLPG011	011	2	PL25x400	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90010	00	CWLPG011	012	1	PL15x950	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90010	00	CWLPG011	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90011	00	CWLPG012	011	2	PL25x400	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90011	00	CWLPG012	012	1	PL15x950	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90011	00	CWLPG012	032	2	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90012	01	CWLPG013	013	2	PL25x300	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90012	01	CWLPG013	014	1	PL15x950	S420MLO	760425	214403/1	1723001495	00040	A0377578	**T51**	
123A90-FDL-ST-DD-90012	01	CWLPG013	023	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90012	01	CWLPG013	024	1	PL15x950	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90012	01	CWLPG013	028	2	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90012	01	CWLPG013	080	2	PL10x132,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90013	00	CWLPG014	013	2	PL25x300	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	

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DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90013	00	CWLPG014	014	1	PL15x950	S420MLO	760425	214403/1	1723001495	00040	A0377578	**T51**	
123A90-FDL-ST-DD-90013	00	CWLPG014	023	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90013	00	CWLPG014	023	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90013	00	CWLPG014	024	1	PL15x950	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90014	00	CWLPG015	015	2	PL25x300	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90014	00	CWLPG015	020	1	PL15x950	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90015	00	CWLPG016	015	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90015	00	CWLPG016	020	1	PL15x950	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90016	00	CWLPG017	015	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90016	00	CWLPG017	020	1	PL15x950	S420MLO	760420	211440/2	1723001495	00040	A0377515	**T18**	
123A90-FDL-ST-DD-90017	00	CWLPG018	015	1	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90017	00	CWLPG018	015	1	PL25x300	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90017	00	CWLPG018	020	1	PL15x950	S420MLO	760420	211440/2	1723001495	00040	A0377515	**T18**	
123A90-FDL-ST-DD-90018	00	CWLPG019	017	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90018	00	CWLPG019	019	1	PL15x950	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90019	00	CWLPG020	017	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90019	00	CWLPG020	019	1	PL15x950	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90020	00	CWLPG021	017	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90020	00	CWLPG021	019	1	PL15x950	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90020	00	CWLPG021	017	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90020	00	CWLPG021	019	1	PL15x950	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90021	00	CWLPG022	017	2	PL25x300	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90021	00	CWLPG022	019	1	PL15x950	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90022	00	CWLPG023	021	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90022	00	CWLPG023	022	1	PL15x950	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90022	00	CWLPG023	026	2	PL25x300	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90022	00	CWLPG023	027	1	PL15x950	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT6**	
123A90-FDL-ST-DD-90023	00	CWLPG024	003	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90023	00	CWLPG024	004	1	PL15x960	S420MLO	760425	214400/2	1723001495	00040	A0377578	**T25**	
123A90-FDL-ST-DD-90024	01	CWLPG025	005	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90024	01	CWLPG025	007	1	PL15x950	S420MLO	760333	212992/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90024	01	CWLPG025	079	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90025	01	CWLPG026	005	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90025	01	CWLPG026	007	1	PL15x950	S420MLO	760333	212992/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90025	01	CWLPG026	079	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90026	01	CWLPG027	005	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90026	01	CWLPG027	007	1	PL15x950	S420MLO	760425	214400/2	1723001495	00040	A0377578	**T25**	
123A90-FDL-ST-DD-90026	01	CWLPG027	078	3	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90026	01	CWLPG027	079	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90027	02	CWLPG028	006	2	PL25x300	S420MLO	860758	170951/2	1723001716	00110	A0376103/A	**T7**	
123A90-FDL-ST-DD-90027	02	CWLPG028	008	1	PL15x950	S420MLO	760425	214400/2	1723001495	00040	A0377578	**T25**	
123A90-FDL-ST-DD-90027	02	CWLPG028	078	2	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90028	00	CWLPG029	003	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90028	00	CWLPG029	004	1	PL15x960	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90028	00	CWLPG029	034	1	PL12x107,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90029	00	CWLPG030	029	2	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90029	00	CWLPG030	057	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90029	00	CWLPG030	058	3	PL10x107,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90029	00	CWLPG030	062	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90029	00	CWLPG030	063	1	PL15x960	S420MLO	760333	212992/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90029	00	CWLPG030	082	2	PL12x107,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90029	00	CWLPG030	084	2	PL12x107,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90030	02	CWLPG031	029	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90030	02	CWLPG031	058	1	PL10x107,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90030	02	CWLPG031	060	2	PL20x250	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90030	02	CWLPG031	061	1	PL15x960	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90031	00	CWLPG032	054	2	PL12x130	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90031	00	CWLPG032	055	3	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90031	00	CWLPG032	056	3	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90031	00	CWLPG032	074	2	PL25x300	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90031	00	CWLPG032	075	1	PL20x950	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	
123A90-FDL-ST-DD-90031	00	CWLPG032	083	2	PL12x130	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90032	01	CWLPG033	055	3	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90032	01	CWLPG033	056	2	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90032	01	CWLPG033	070	2	PL25x300	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90032	01	CWLPG033	071	1	PL20x950	S420MLO	760946	216927/1	1723001495	00030	A0377578	**T40**	
123A90-FDL-ST-DD-90034	01	CWLPG035	055	2	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90034	01	CWLPG035	056	2	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90034	01	CWLPG035	070	1	PL25x300	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90034	01	CWLPG035	070	1	PL25x300	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90034	01	CWLPG035	071	1	PL20x950	S420MLO	760946	216927/1	1723001495	00030	A0377578	**T40**	
123A90-FDL-ST-DD-90034	01	CWLTB201	545	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90035	00	CWLPG036	055	2	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90035	00	CWLPG036	056	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90035	00	CWLPG036	070	2	PL25x300	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90035	00	CWLPG036	071	1	PL20x950	S420MLO	760946	216927/1	1723001495	00030	A0377578	**T40**	
123A90-FDL-ST-DD-90036	00	CWLPG037	055	2	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90036	00	CWLPG037	056	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90036	00	CWLPG037	070	2	PL25x300	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90036	00	CWLPG037	071	1	PL20x950	S420MLO	861927	170992/1	1723001716	00100	A0376103/A	**T9**	
123A90-FDL-ST-DD-90036	00	CWLPG037	087	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90037	02	CWLPG038	057	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90037	02	CWLPG038	058	1	PL10x107,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90037	02	CWLPG038	060	2	PL20x250	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90037	02	CWLPG038	061	1	PL15x960	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90038	01	CWLPG039	059	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90038	01	CWLPG039	064	2	PL20x250	S420MLO	760946	216929/1	1723001495	00030	A0377578	**T44**	
123A90-FDL-ST-DD-90038	01	CWLPG039	065	1	PL15x960	S420MLO	760333	212992/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90039	01	CWLPG040	060	2	PL20x250	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90039	01	CWLPG040	061	1	PL15x960	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90039	01	CWLPG040	082	2	PL12x102,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90040	02	CWLPG041	060	1	PL20x250	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90040	02	CWLPG041	060	1	PL20x250	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90040	02	CWLPG041	061	1	PL15x960	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90040	02	CWLPG041	086	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90041	00	CWLPG042	066	2	PL25x400	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90041	00	CWLPG042	067	1	PL20x950	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90041	00	CWLPG042	076	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90042	00	CWLPG043	066	2	PL25x400	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90042	00	CWLPG043	067	1	PL20x950	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90042	00	CWLPG043	076	2	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90042	00	CWLPG043	077	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90042	00	CWLPG043	088	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90043	00	CWLPG044	066	1	PL25x400	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90043	00	CWLPG044	066	1	PL25x400	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90043	00	CWLPG044	067	1	PL20x950	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90043	00	CWLPG044	076	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90043	00	CWLPG044	077	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90043	00	CWLPG044	088	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90044	00	CWLPG045	066	2	PL25x400	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90044	00	CWLPG045	067	1	PL20x950	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90044	00	CWLPG045	088	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90045	01	CWLPG046	068	1	PL25x400	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90045	01	CWLPG046	068	1	PL25x400	S420MLO	954770	213955/1	1723001495	00020	A0377578	**T31**	
123A90-FDL-ST-DD-90045	01	CWLPG046	069	1	PL20x950	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90045	01	CWLPG046	076	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90045	01	CWLPG046	077	1	PL10x180	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90046	01	CWLPG047	068	2	PL25x400	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90046	01	CWLPG047	069	1	PL20x950	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90046	01	CWLPG047	076	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90046	01	CWLPG047	077	1	PL10x180	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90047	01	CWLPG048	068	2	PL25x400	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90047	01	CWLPG048	069	1	PL20x950	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90048	01	CWLPG049	068	1	PL25x400	S420MLO	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90048	01	CWLPG049	068	1	PL25x400	S420MLO	861322	170954/1	1723001716	00110	A0376103/A	**T6**	
123A90-FDL-ST-DD-90048	01	CWLPG049	069	1	PL20x950	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90049	00	CWLNO001	035	2	PL15x101,8	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90049	00	CWLNO001	042	1	Ø406,4x19,05	API5LX52	72580		1723001797	00060	B28684/1	**TT2**	
123A90-FDL-ST-DD-90049	00	CWLNO001	156	1	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90049	00	CWLNO001	158	1	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90050	00	CWLNO002	035	2	PL15x101,8	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90050	00	CWLNO002	042	1	Ø406,4x19,05	API5LX52	72580		1723001797	00060	B28684/1	**TT2**	
123A90-FDL-ST-DD-90050	00	CWLNO002	043	1	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90050	00	CWLNO002	156	1	PL25x610	S420MLO	860758	170955/2	1723001716	00060	A0376103/A	**T14**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90051	00	CWLNO003	035	2	PL15x101,8	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90051	00	CWLNO003	042	1	Ø406,4x19,05	API5LX52	72580		1723001797	00060	B28684/1	**TT2**	
123A90-FDL-ST-DD-90051	00	CWLNO003	043	1	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90051	00	CWLNO003	156	1	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90052	00	CWLNO004	036	1	PL25x480	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90052	00	CWLNO004	037	1	PL25x480	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90052	00	CWLNO004	038	1	PL20x480	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90052	00	CWLNO004	039	1	PL15x280	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90052	00	CWLNO004	040	1	PL15x350	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90052	00	CWLNO004	041	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT3**	
123A90-FDL-ST-DD-90053	00	CWLNO005	036	1	PL25x480	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90053	00	CWLNO005	037	1	PL25x480	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90053	00	CWLNO005	038	1	PL20x480	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90053	00	CWLNO005	039	1	PL15x280	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90053	00	CWLNO005	040	1	PL15x350	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90053	00	CWLNO005	041	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT3**	
123A90-FDL-ST-DD-90054	00	CWLNO006	042	1	Ø406,4x19,05	API5LX52	72580		1723001797	00060	B28684/1	**TT2**	
123A90-FDL-ST-DD-90054	00	CWLNO006	155	2	PL25x610	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90055	00	CWLNO007	044	1	Ø273,1x15,09	API5LX52	49921		1716001444	00040	158	**TT4**	
123A90-FDL-ST-DD-90055	00	CWLNO007	045	1	PL15x148,5	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90055	00	CWLNO007	046	1	PL20x480	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90055	00	CWLNO007	157	1	PL20x480	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90056	00	CWLNO008	044	1	Ø273,1x15,09	API5LX52	49921		1716001444	00040	158	**TT4**	
123A90-FDL-ST-DD-90056	00	CWLNO008	045	1	PL15x148,5	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90056	00	CWLNO008	046	1	PL20x480	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90056	00	CWLNO008	157	1	PL20x480	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90057	00	CWLNO009	047	2	PL25x610	S420MLOZ	954770	213965/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90057	00	CWLNO009	048	1	PL20x944	S420MLO	760946	216927/1	1723001495	00030	A0377578	**T40**	
123A90-FDL-ST-DD-90057	00	CWLNO009	049	2	PL15x295	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90057	00	CWLNO009	050	2	PL15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT9**	
123A90-FDL-ST-DD-90057	00	CWLNO009	051	2	PL15x716,4	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT8**	
123A90-FDL-ST-DD-90058	01	CWLNO010	047	2	PL25x610	S420MLOZ	954770	213965/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90058	01	CWLNO010	048	1	PL20x944	S420MLO	760946	216927/1	1723001495	00030	A0377578	**T40**	
123A90-FDL-ST-DD-90058	01	CWLNO010	049	2	PL15x295	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90058	01	CWLNO010	050	2	PL15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT9**	
123A90-FDL-ST-DD-90058	01	CWLNO010	051	2	PL15x716,4	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT8**	
123A90-FDL-ST-DD-90058	01	CWLNO010	1157	2	PL25x142	S420MLOZ	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90058	01	CWLNO010	1158	2	PL25x142	S420MLOZ	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90058	01	CWLNO010	1159	2	PL25x142	S420MLOZ	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90058	01	CWLNO010	1160	1	PL30x669	S420MLO	869272	249352/1	1724000081	00080	A0378613		
123A90-FDL-ST-DD-90058	01	CWLNO010	1161	1	PL30x327,8	S420MLO	869272	249352/1	1724000081	00080	A0378613		
123A90-FDL-ST-DD-90058	01	CWLNO010	1162	1	PL30x326,7	S420MLO	869272	249352/1	1724000081	00080	A0378613		
123A90-FDL-ST-DD-90059	00	CWLNO011	047	2	PL25x610	S420MLOZ	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90059	00	CWLNO011	048	1	PL20x944	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90059	00	CWLNO011	049	2	PL15x295	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90059	00	CWLNO011	050	2	PL15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT9**	
123A90-FDL-ST-DD-90059	00	CWLNO011	051	2	PL15x716,4	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT8**	
123A90-FDL-ST-DD-90060	00	CWLNO012	047	2	PL25x610	S420MLOZ	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90060	00	CWLNO012	048	1	PL20x944	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90060	00	CWLNO012	049	2	PL15x295	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90060	00	CWLNO012	050	1	PL15x950	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT6**	
123A90-FDL-ST-DD-90060	00	CWLNO012	050	1	PL15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT9**	
123A90-FDL-ST-DD-90060	00	CWLNO012	051	2	PL15x716,4	S420MLO	827475	193480/2	1723001716	00090	A0365754/A	**TT8**	
123A90-FDL-ST-DD-90061	01	CWLNO013	052	1	Ø323,9x15,88	API5LX52	57950		1719000840	00090	B11174/1	**TT5**	
123A90-FDL-ST-DD-90061	01	CWLNO013	053	2	PL25x530	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90062	01	CWLNO014	052	1	Ø323,9x15,88	API5LX52	57950		1719000840	00090	B11174/1	**TT5**	
123A90-FDL-ST-DD-90062	01	CWLNO014	053	2	PL25x530	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90063	01	CWLNO015	089	1	SPD800x40	S420MLOZ	952379	194405/1	1723001716	00010	A0376909/A	**TT10**	
123A90-FDL-ST-DD-90063	01	CWLNO015	090	2	PL20x850	S420MLO	760946	216933/2	1723001495	00030	A0377578	**T39**	
123A90-FDL-ST-DD-90063	01	CWLNO015	091	1	PL15x950	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90063	01	CWLNO015	092	1	PL15x200	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90063	01	CWLNO015	093	1	PL40x2500	S420MLOZ	955033	216692/1	1723001495	00010	A0377515	**T16**	
123A90-FDL-ST-DD-90063	01	CWLNO015	094	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90063	01	CWLNO015	095	4	PL15x180	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90063	01	CWLNO015	097	2	PL20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT7**	
123A90-FDL-ST-DD-90063	01	CWLNO015	098	2	PL15x300	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90063	01	CWLNO015	099	2	PL15x397,4	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90064	01	CWLNO016	089	1	SPD800x40	S420MLOZ	952379	194405/1	1723001716	00010	A0376909/A	**TT20**	
123A90-FDL-ST-DD-90064	01	CWLNO016	090	2	PL20x850	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90064	01	CWLNO016	091	1	PL15x950	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90064	01	CWLNO016	092	1	PL15x200	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90064	01	CWLNO016	093	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90064	01	CWLNO016	094	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90064	01	CWLNO016	095	4	PL15x180	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90064	01	CWLNO016	097	2	PL20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT7**	
123A90-FDL-ST-DD-90064	01	CWLNO016	098	2	PL15x300	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90064	01	CWLNO016	099	2	PL15x397,4	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90065	01	CWLNO017	089	1	SPD800x40	S420MLOZ	952379	194405/1	1723001716	00010	A0376909/A	**TT21**	
123A90-FDL-ST-DD-90065	01	CWLNO017	090	2	PL20x850	S420MLO	760946	216931/2	1723001495	00030	A0377578	**T43**	
123A90-FDL-ST-DD-90065	01	CWLNO017	091	1	PL15x950	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90065	01	CWLNO017	092	1	PL15x200	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90065	01	CWLNO017	093	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90065	01	CWLNO017	094	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90065	01	CWLNO017	095	4	PL15x180	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90065	01	CWLNO017	097	2	PL20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT7**	
123A90-FDL-ST-DD-90065	01	CWLNO017	098	2	PL15x300	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90065	01	CWLNO017	099	2	PL15x397,4	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90066	01	CWLNO018	089	1	SPD800x40	S420MLOZ	952379	194405/1	1723001716	00010	A0376909/A	**TT22**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90066	01	CWLNO018	090	2	PL20x850	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90066	01	CWLNO018	091	1	PL15x950	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90066	01	CWLNO018	092	1	PL15x200	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90066	01	CWLNO018	093	1	PL40x2500	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90066	01	CWLNO018	094	1	PL40x2500	S420MLOZ	955033	216692/1	1723001495	00010	A0377515	**T16**	
123A90-FDL-ST-DD-90066	01	CWLNO018	095	4	PL15x180	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90066	01	CWLNO018	097	2	PL20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT7**	
123A90-FDL-ST-DD-90066	01	CWLNO018	098	2	PL15x300	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90066	01	CWLNO018	099	2	PL15x397,4	S420MLO	735829	285777/1	1723001716	00050	A0370161/A	**T1**	
123A90-FDL-ST-DD-90067	02	CWLSB001	159	1	HEA500	S355J2	44519		1723001808	00030	4677266		
123A90-FDL-ST-DD-90067	02	CWLSB001	172	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90067	02	CWLSB002	160	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90067	02	CWLSB003	160	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90067	02	CWLSB004	161	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90067	02	CWLSB005	161	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90067	02	CWLSB006	540	1	HEA340	S355J2	138092B		1723001808	00020	2588		
123A90-FDL-ST-DD-90067	02	CWLSB007	162	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90067	02	CWLSB008	162	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90067	02	CWLSB009	162	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90068	01	CWLSB010	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90068	01	CWLSB010	539	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90068	01	CWLSB011	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90068	01	CWLSB011	323	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90068	01	CWLSB012	162	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90068	01	CWLSB012	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90068	01	CWLSB014	162	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90068	01	CWLSB014	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90069	00	CWLSB015	163	1	HEA500	S355J2	63404		1723001808	00030	4879675		
123A90-FDL-ST-DD-90069	00	CWLSB015	176	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90069	00	CWLSB016	164	1	HEA500	S355J2	63404		1723001808	00030	4879675		
123A90-FDL-ST-DD-90069	00	CWLSB016	171	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90069	00	CWLSB016	176	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90069	00	CWLSB016	183	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90069	00	CWLSB017	165	1	HEA500	S355J2	44519		1723001808	00030	4677266		
123A90-FDL-ST-DD-90069	00	CWLSB018	166	1	HEA500	S355J2	46712		1723001808	00030	4746457		
123A90-FDL-ST-DD-90069	00	CWLSB018	171	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90069	00	CWLSB018	183	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90069	00	CWLSB019	167	1	HEA340	S355J2	59797		1723001808	00020	1047/6-2022		
123A90-FDL-ST-DD-90069	00	CWLSB020	167	1	HEA340	S355J2	132332A		1723001808	00020	1098		
123A90-FDL-ST-DD-90070	02	CWLSB021	168	1	HEA500	S355J2	46712		1723001808	00030	4746457		
123A90-FDL-ST-DD-90070	02	CWLSB022	169	1	HEA500	S355J2	46712		1723001808	00030	4746457		
123A90-FDL-ST-DD-90070	02	CWLSB022	171	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90070	02	CWLSB022	176	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90070	02	CWLSB022	183	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90070	02	CWLSB023	170	1	HEA500	S355J2	64721		1723001808	00030	4943183		
123A90-FDL-ST-DD-90070	02	CWLSB025	583	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90070	02	CWLSB026	174	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90071	01	CWLSB027	175	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90071	01	CWLSB028	175	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90071	01	CWLSB031	177	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90071	01	CWLSB032	177	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90071	01	CWLSB034	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90071	01	CWLSB034	542	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90071	01	CWLSB035	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90071	01	CWLSB035	543	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90072	01	CWLSB036	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90072	01	CWLSB036	180	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90072	01	CWLSB037	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90072	01	CWLSB037	180	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90072	01	CWLSB041	182	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90073	00	CWLSB042	207	1	HEA500	S355J2	64721		1723001808	00030	4943183		
123A90-FDL-ST-DD-90073	00	CWLSB042	208	1	PL15x490	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90073	00	CWLSB042	209	1	PL20x300	S355MLO	629931	25F.190.01	1723000952	00040	08LP23		
123A90-FDL-ST-DD-90073	00	CWLSB042	210	2	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90073	00	CWLSB042	211	1	PL12x118,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90073	00	CWLSB042	212	1	PL12x118,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90073	00	CWLSB042	213	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90073	00	CWLSB043	214	1	HEA500	S355J2	63404		1723001808	00030	4879675		
123A90-FDL-ST-DD-90073	00	CWLSB043	215	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90073	00	CWLSB043	216	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90074	00	CWUPG001	100	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90074	00	CWUPG001	101	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3	**TT1**	
123A90-FDL-ST-DD-90074	00	CWUPG001	102	1	PL15x240	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90074	00	CWUPG001	103	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90074	00	CWUPG001	129	2	PL40x500	S420MLO	952379	194403/1	1723001716	00120	A0376909/A	**T8**	
123A90-FDL-ST-DD-90074	00	CWUPG001	130	1	PL20x920	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	
123A90-FDL-ST-DD-90075	00	CWUPG002	100	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90075	00	CWUPG002	101	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3	**TT1**	
123A90-FDL-ST-DD-90075	00	CWUPG002	102	1	PL15x240	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90075	00	CWUPG002	103	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90075	00	CWUPG002	129	2	PL40x500	S420MLO	952379	194403/1	1723001716	00120	A0376909/A	**T8**	
123A90-FDL-ST-DD-90075	00	CWUPG002	130	1	PL20x920	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	
123A90-FDL-ST-DD-90076	00	CWUPG003	100	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90076	00	CWUPG003	101	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3	**TT1**	
123A90-FDL-ST-DD-90076	00	CWUPG003	102	1	PL15x240	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90076	00	CWUPG003	103	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90076	00	CWUPG003	129	2	PL40x500	S420MLO	952379	194403/1	1723001716	00120	A0376909/A	**T8**	
123A90-FDL-ST-DD-90076	00	CWUPG003	130	1	PL20x920	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
	Discipline	**STRUCTURE**			
ROSETTI MARINO	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90077	00	CWUPG004	100	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90077	00	CWUPG004	101	2	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3	**TT1**	
123A90-FDL-ST-DD-90077	00	CWUPG004	102	1	PL15x240	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90077	00	CWUPG004	103	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90077	00	CWUPG004	129	2	PL40x500	S420MLO	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90077	00	CWUPG004	130	1	PL20x920	S420MLO	760946	216927/2	1723001495	00030	A0377578	**T38**	
123A90-FDL-ST-DD-90078	00	CWUPG005	104	2	PL20x250	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90078	00	CWUPG005	105	1	PL15x960	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90079	00	CWUPG006	104	2	PL20x250	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90079	00	CWUPG006	105	1	PL15x960	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90080	00	CWUPG007	104	2	PL20x250	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90080	00	CWUPG007	105	1	PL15x960	S420MLO	760425	214401/1	1723001495	00040	A0377578	**T35**	
123A90-FDL-ST-DD-90081	00	CWUPG008	104	2	PL20x250	S420MLO	760946	216927/2	1723001495	00030	A0377578	**T38**	
123A90-FDL-ST-DD-90081	00	CWUPG008	105	1	PL15x960	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90082	00	CWUPG011	108	2	PL25x300	S420MLO	860758	170955/2	1723001716	00060	A0376103/A	**T14**	
123A90-FDL-ST-DD-90082	00	CWUPG011	109	1	PL15x960	S420MLO	735829	285784/1	1723001716	00050	A0370049/A	**T3**	
123A90-FDL-ST-DD-90082	00	CWUPG011	149	7	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90082	00	CWUPG011	324	2	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90083	00	CWUPG012	108	2	PL25x300	S420MLO	860758	170955/2	1723001716	00060	A0376103/A	**T14**	
123A90-FDL-ST-DD-90083	00	CWUPG012	109	1	PL15x960	S420MLO	735829	285784/1	1723001716	00050	A0370049/A	**T3**	
123A90-FDL-ST-DD-90083	00	CWUPG012	149	7	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90083	00	CWUPG012	151	1	PL10x132,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90083	00	CWUPG012	324	2	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90084	01	CWUPG013	108	1	PL25x300	S420MLO	860758	170955/2	1723001716	00060	A0376103/A	**T14**	
123A90-FDL-ST-DD-90084	01	CWUPG013	108	1	PL25x300	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90084	01	CWUPG013	109	1	PL15x960	S420MLO	929534	298464/2	1723001716	00050	A0370744/A	**T4**	
123A90-FDL-ST-DD-90084	01	CWUPG013	149	8	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90084	01	CWUPG013	324	2	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90085	01	CWUPG014	108	2	PL25x300	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90085	01	CWUPG014	109	1	PL15x960	S420MLO	929534	298464/2	1723001716	00050	A0370744/A	**T4**	
123A90-FDL-ST-DD-90085	01	CWUPG014	149	6	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90085	01	CWUPG014	324	1	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90086	00	CWUPG017	114	2	PL25x300	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90086	00	CWUPG017	115	1	PL15x950	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T33**	
123A90-FDL-ST-DD-90086	00	CWUPG017	143	2	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90087	00	CWUPG018	116	2	PL25x300	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90087	00	CWUPG018	117	1	PL20x950	S420MLO	760946	216935/1	1723001495	00030	A0377578	**T32**	
123A90-FDL-ST-DD-90087	00	CWUPG018	145	1	PL12x130	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90087	00	CWUPG018	146	1	PL12x130	S355MLO	492648	507239-01	1721002275	00020	468621-002	**T52**	
123A90-FDL-ST-DD-90087	00	CWUPG018	147	6	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90087	00	CWUPG018	148	6	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90087	00	CWUPG018	152	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90087	00	CWUPG018	325	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90088	01	CWUPG019	116	2	PL25x300	S420MLO	954770	213961/1	1723001495	00020	A0377578	**T28**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90088	01	CWUPG019	117	1	PL20x950	S420MLO	760946	216927/2	1723001495	00030	A0377578	**T38**	
123A90-FDL-ST-DD-90088	01	CWUPG019	145	1	PL12x130	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90088	01	CWUPG019	146	1	PL12x130	S355MLO	492648	507239-01	1721002275	00020	468621-002	**T52**	
123A90-FDL-ST-DD-90088	01	CWUPG019	147	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90088	01	CWUPG019	148	1	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90088	01	CWUPG019	325	4	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90089	00	CWUPG020	116	2	PL25x300	S420MLO	954770	213961/1	1723001495	00020	A0377578	**T28**	
123A90-FDL-ST-DD-90089	00	CWUPG020	117	1	PL20x950	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90089	00	CWUPG020	145	1	PL12x130	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90089	00	CWUPG020	147	5	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90089	00	CWUPG020	148	5	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90089	00	CWUPG020	325	2	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90090	00	CWUPG022	118	2	PL25x300	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90090	00	CWUPG022	119	1	PL20x950	S420MLO	760946	216933/1	1723001495	00030	A0377578	**T45**	
123A90-FDL-ST-DD-90090	00	CWUPG022	143	1	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90090	00	CWUPG022	154	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90091	01	CWUPG023	120	2	PL40x400	S420MLO	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90091	01	CWUPG023	121	1	PL15x920	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90092	03	CWUPG021	117	1	PL20x950	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90092	03	CWUPG021	147	3	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90092	03	CWUPG021	148	2	PL10x130	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90092	03	CWUPG021	309	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90092	03	CWUPG021	1153	2	PL25x300	S420MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90092	03	CWUPG021	1154	2	PL25x1000	S420MLOZ	861322	170954/1	1723001716	00110	A0376103/A		
123A90-FDL-ST-DD-90092	03	CWUPG021	1155	2	PL25x300	S420MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90092	03	CWUPG021	1156	4	Ø700x30	S420MLO	863028	181861-1	1724000112	00060	A0376299/A		
123A90-FDL-ST-DD-90093	01	CWUPG024	120	2	PL40x400	S420MLO	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90093	01	CWUPG024	121	1	PL15x920	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90094	01	CWUPG025	120	2	PL40x400	S420MLO	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90094	01	CWUPG025	121	1	PL15x920	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90095	01	CWUPG026	120	2	PL40x400	S420MLO	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90095	01	CWUPG026	121	1	PL15x920	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90096	00	CWUPG027	122	2	PL40x400	S420MLO	952379	194403/1	1723001716	00120	A0376909/A	**T8**	
123A90-FDL-ST-DD-90096	00	CWUPG027	123	1	PL15x920	S420MLO	760333	212992/11	1723001495	00040	A0377578	**T22**	
123A90-FDL-ST-DD-90096	00	CWUPG027	136	2	PL40x400	S420MLO	955033	216692/1	1723001495	00010	A0377515	**T16**	
123A90-FDL-ST-DD-90096	00	CWUPG027	137	1	PL15x920	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T33**	
123A90-FDL-ST-DD-90097	00	CWUPG028	124	2	PL40x400	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90097	00	CWUPG028	125	1	PL15x920	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T33**	
123A90-FDL-ST-DD-90098	00	CWUPG029	124	2	PL40x400	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90098	00	CWUPG029	125	1	PL15x920	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T33**	
123A90-FDL-ST-DD-90099	00	CWUPG030	125	1	PL15x920	S420MLO	760333	212992/11	1723001495	00040	A0377578	**T22**	
123A90-FDL-ST-DD-90099	00	CWUPG030	126	2	PL40x400	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90100	00	CWUPG031	125	1	PL15x920	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90100	00	CWUPG031	126	1	PL40x400	S420MLO	955033	216692/1	1723001495	00010	A0377515	**T16**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90100	00	CWUPG031	126	1	PL40x400	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90101	02	CWUPG032	138	2	PL25x400	S420MLO	954770	213961/1	1723001495	00020	A0377578	**T28**	
123A90-FDL-ST-DD-90101	02	CWUPG032	138	2	PL25x400	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90101	02	CWUPG032	365	1	PL15x950	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90101	02	CWUPG032	790	2	PL25x610	S420MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90101	02	CWUPG032	791	2	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90101	02	CWUPG032	792	8	PL15x182,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90102	02	CWUPG033	138	4	PL25x400	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90102	02	CWUPG033	365	1	PL15x950	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90102	02	CWUPG033	790	2	PL25x610	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90102	02	CWUPG033	791	2	Ø406,4x15,88	API5LX52	456780		1721002523	00030	B 20155/1		
123A90-FDL-ST-DD-90102	02	CWUPG033	792	8	PL15x182,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90105	02	CWUPG038	131	2	PL40x500	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90105	02	CWUPG038	132	1	PL15x920	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90105	02	CWUPG038	784	2	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90105	02	CWUPG038	785	2	PL40x650	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90105	02	CWUPG038	786	2	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90105	02	CWUPG038	787	1	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90105	02	CWUPG038	788	2	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90105	02	CWUPG038	789	4	PL15x232,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90106	02	CWUPG039	784	2	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90106	02	CWUPG039	785	2	PL40x650	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90106	02	CWUPG039	786	2	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90106	02	CWUPG039	787	1	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90106	02	CWUPG039	788	2	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90106	02	CWUPG039	789	4	PL15x232,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90106	02	CWUPG039	131	2	PL40x500	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90106	02	CWUPG039	132	1	PL15x920	S420MLO	760425	214401/1	1723001495	00040	A0377578	**T35**	
123A90-FDL-ST-DD-90107	02	CWUPG040	784	2	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90107	02	CWUPG040	785	2	PL40x650	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90107	02	CWUPG040	786	2	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90107	02	CWUPG040	787	1	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90107	02	CWUPG040	788	2	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90107	02	CWUPG040	789	4	PL15x232,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90107	02	CWUPG040	131	1	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515	**T16**	
123A90-FDL-ST-DD-90107	02	CWUPG040	131	1	PL40x500	S420MLO	955033	216696/1	1723001495	00010	A0377515	**T17**	
123A90-FDL-ST-DD-90107	02	CWUPG040	132	1	PL15x920	S420MLO	760425	214401/1	1723001495	00040	A0377578	**T35**	
123A90-FDL-ST-DD-90108	02	CWUPG041	784	2	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90108	02	CWUPG041	785	2	PL40x650	S420MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90108	02	CWUPG041	786	2	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90108	02	CWUPG041	787	1	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90108	02	CWUPG041	788	2	PL15x150	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90108	02	CWUPG041	789	4	PL15x232,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90108	02	CWUPG041	131	2	PL40x500	S420MLO	955033	216692/1	1723001495	00010	A0377515	**T16**	

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90108	02	CWUPG041	132	1	PL15x920	S420MLO	760425	214402/1	1723001495	00040	A0377578	T48	
123A90-FDL-ST-DD-90111	01	CWUPG044	139	2	PL25x400	S420MLO	869272	249357/1	1724000081	00110	A0378546		
123A90-FDL-ST-DD-90111	01	CWUPG044	140	1	PL15x950	S420MLO	760333	212990/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90112	01	CWUPG045	139	2	PL25x400	S420MLO	869272	249357/1	1724000081	00110	A0378546		
123A90-FDL-ST-DD-90112	01	CWUPG045	140	1	PL15x950	S420MLO	760333	212990/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90113	00	CWLSB044	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90113	00	CWLSB044	219	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90113	00	CWLSB044	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB044	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB045	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90113	00	CWLSB045	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB045	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB045	265	1	HEA340	S355J2	61769		1723001808	00020	4837376		
123A90-FDL-ST-DD-90113	00	CWLSB046	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90113	00	CWLSB046	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB046	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB046	266	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90113	00	CWLSB047	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90113	00	CWLSB047	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB047	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB047	266	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90113	00	CWLSB048	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90113	00	CWLSB048	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB048	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90113	00	CWLSB048	267	1	HEA340	S355J2	70494		1723001808	00020	2357/6-2023		
123A90-FDL-ST-DD-90114	01	CWLSB049	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90114	01	CWLSB049	228	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90114	01	CWLSB049	255	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90114	01	CWLSB049	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90114	01	CWLSB049	268	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90114	01	CWLSB049	308	1	PL15x645	S355MLO	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90114	01	CWLSB050	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90114	01	CWLSB050	228	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90114	01	CWLSB050	255	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90114	01	CWLSB050	256	1	PL15x645	S355MLO	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90114	01	CWLSB050	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90114	01	CWLSB050	269	1	HEA340	S355J2	61229		1723001808	00020	4814334		
123A90-FDL-ST-DD-90114	01	CWLSB051	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90114	01	CWLSB051	228	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90114	01	CWLSB051	255	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90114	01	CWLSB051	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90114	01	CWLSB051	270	1	HEA340	S355J2	61229		1723001808	00020	4814334		
123A90-FDL-ST-DD-90114	01	CWLSB051	308	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90115	00	CWLSB052	217	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90115	00	CWLSB052	254	2	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90115	00	CWLSB053	218	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90115	00	CWLSB053	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90115	00	CWLSB053	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90115	00	CWLSB053	224	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90115	00	CWLSB053	254	1	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90115	00	CWLSB054	219	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90115	00	CWLSB054	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90115	00	CWLSB054	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90115	00	CWLSB054	227	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90115	00	CWLSB055	243	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90115	00	CWLSB056	221	1	PL10x322	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90115	00	CWLSB056	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90115	00	CWLSB056	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90115	00	CWLSB056	250	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90116	00	CWLSB057	221	1	PL10x322	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90116	00	CWLSB057	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90116	00	CWLSB057	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90116	00	CWLSB057	250	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90116	00	CWLSB058	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90116	00	CWLSB058	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90116	00	CWLSB058	224	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90116	00	CWLSB058	264	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90116	00	CWLSB059	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90116	00	CWLSB059	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90116	00	CWLSB059	224	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90116	00	CWLSB059	264	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90116	00	CWLSB060	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90116	00	CWLSB060	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90116	00	CWLSB060	224	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90116	00	CWLSB060	264	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90116	00	CWLSB061	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90116	00	CWLSB061	230	1	PL10x317	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90116	00	CWLSB061	231	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90116	00	CWLSB061	235	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90117	02	CWLSB062	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90117	02	CWLSB062	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90117	02	CWLSB062	328	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90117	02	CWLSB062	329	1	PL10x462,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90117	02	CWLSB063	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90117	02	CWLSB063	240	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90117	02	CWLSB063	258	1	PL10x462,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90117	02	CWLSB063	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90117	02	CWLSB064	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90117	02	CWLSB064	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90117	02	CWLSB064	329	1	PL10x462,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90117	02	CWLSB064	557	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90117	02	CWLSB072	227	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90117	02	CWLSB072	228	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90117	02	CWLSB072	229	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90117	02	CWLSB072	255	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90117	02	CWLSB072	256	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90117	02	CWLSB072	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90118	01	CWLSB065	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90118	01	CWLSB065	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90118	01	CWLSB065	262	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90118	01	CWLSB065	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90118	01	CWLSB067	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90118	01	CWLSB067	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90118	01	CWLSB067	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90118	01	CWLSB067	556	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90118	01	CWLSB069	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90118	01	CWLSB069	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90118	01	CWLSB069	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90118	01	CWLSB069	556	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90118	01	CWLSB073	232	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90118	01	CWLSB073	233	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90118	01	CWLSB073	247	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90118	01	CWLSB074	232	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90118	01	CWLSB074	233	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90118	01	CWLSB074	272	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90119	01	CWLSB066	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90119	01	CWLSB066	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90119	01	CWLSB066	262	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90119	01	CWLSB066	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90119	01	CWLSB068	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90119	01	CWLSB068	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90119	01	CWLSB068	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90119	01	CWLSB068	556	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90119	01	CWLSB070	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90119	01	CWLSB070	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90119	01	CWLSB070	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90119	01	CWLSB070	556	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90119	01	CWLSB071	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90119	01	CWLSB071	259	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90119	01	CWLSB071	262	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90119	01	CWLSB071	263	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90119	01	CWLSB079	236	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90120	00	CWLSB075	234	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB076	234	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB077	234	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB078	234	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB080	237	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB081	237	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB082	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB083	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB084	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB085	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB086	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB087	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB088	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB089	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB090	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB091	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB092	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB093	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB094	237	1	IPE330	S355J2	CE248329		1723001808	00050	202275076		
123A90-FDL-ST-DD-90120	00	CWLSB095	238	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90121	00	CWLSB096	239	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90121	00	CWLSB097	241	1	IPE330	S355J2	65136		1724000079	00230	4816431		
123A90-FDL-ST-DD-90121	00	CWLSB098	241	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90121	00	CWLSB099	242	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90121	00	CWLSB099	254	1	PL10x66,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90121	00	CWLSB100	242	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90121	00	CWLSB100	254	1	PL10x66,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90121	00	CWLSB101	243	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90121	00	CWLSB102	243	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90121	00	CWLSB103	243	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90121	00	CWLSB104	244	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90121	00	CWLSB105	245	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90121	00	CWLSB106	246	1	IPE330	S355J2	223182		1723001808	00050	01-E-85426		
123A90-FDL-ST-DD-90122	00	CWLSB107	248	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90122	00	CWLSB107	260	1	PL12x72,6	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB107	261	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB108	248	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90122	00	CWLSB108	260	1	PL12x72,6	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90122	00	CWLSB108	261	1	PL12x72,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90122	00	CWLSB109	249	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90122	00	CWLSB110	249	1	IPE330	S355J2	141202A		1723001808	00050	1446		
123A90-FDL-ST-DD-90122	00	CWLSB111	251	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90122	00	CWLSB112	252	1	IPE330	S355J2	CE248330		1723001808	00050	202275076		
123A90-FDL-ST-DD-90122	00	CWLSB113	253	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90122	00	CWLSB114	260	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB114	261	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB114	271	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90122	00	CWLSB115	260	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB115	261	1	PL12x72,5	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90122	00	CWLSB115	271	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90123	02	CWLSB024	173	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90123	02	CWLSB033	178	1	HEA340	S355J2	63746		1723001808	00020	398/11-2022		
123A90-FDL-ST-DD-90123	02	CWLSB033	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90123	02	CWLSB039	179	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90123	02	CWLSB039	181	1	HEA340	S355J2	63746		1723001808	00020	398/11-2022		
123A90-FDL-ST-DD-90123	02	CWLSB040	327	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90124	03	CWLSB116	331	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90124	03	CWLSB117	558	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90124	03	CWLSB117	984	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90125	00	CWUNO001	184	1	PL20x914	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90125	00	CWUNO001	185	1	PL15x365	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90125	00	CWUNO001	185	1	PL15x365	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90125	00	CWUNO001	186	2	PL40x750	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90125	00	CWUNO001	187	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT11**	
123A90-FDL-ST-DD-90125	00	CWUNO001	188	4	PLATE20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT23**	
123A90-FDL-ST-DD-90126	00	CWUNO002	184	1	PL20x914	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90126	00	CWUNO002	185	1	PL15x365	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90126	00	CWUNO002	185	1	PL15x365	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90126	00	CWUNO002	186	2	PL40x750	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90126	00	CWUNO002	187	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT11**	
123A90-FDL-ST-DD-90126	00	CWUNO002	188	4	PLATE20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT23**	
123A90-FDL-ST-DD-90127	00	CWUNO003	189	1	PL15x954	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T18**	
123A90-FDL-ST-DD-90127	00	CWUNO003	190	2	PL15x272,5	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90127	00	CWUNO003	191	2	PL20x560	S420MLO	760946	216927/2	1723001495	00030	A0377578	**T38**	
123A90-FDL-ST-DD-90127	00	CWUNO003	192	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT11**	
123A90-FDL-ST-DD-90127	00	CWUNO003	193	4	PLATE12x709,8	S420MLO	492648	507239-01	1721002275	00020	468621-002	**TT14**	
123A90-FDL-ST-DD-90128	00	CWUNO004	189	1	PL15x954	S420MLO	760425	214401/1	1723001495	00040	A0377578	**T35**	
123A90-FDL-ST-DD-90128	00	CWUNO004	190	2	PL15x272,5	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90128	00	CWUNO004	191	2	PL20x560	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90128	00	CWUNO004	192	4	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23	**TT11**	
123A90-FDL-ST-DD-90128	00	CWUNO004	193	4	PLATE12x709,8	S420MLO	492648	507239-01	1721002275	00020	468621-002	**TT14**	
123A90-FDL-ST-DD-90129	00	CWUNO005	194	4	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6	**TT12**	
123A90-FDL-ST-DD-90129	00	CWUNO005	195	1	PL20x955,5	S420MLO	760946	216935/1	1723001495	00030	A0377578	**T32**	
123A90-FDL-ST-DD-90129	00	CWUNO005	196	2	PL15x295	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90129	00	CWUNO005	197	1	PL25x610	S420MLOZ	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90129	00	CWUNO005	198	1	PL25x610	S420MLOZ	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90129	00	CWUNO005	199	2	PLATE15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT15**	
123A90-FDL-ST-DD-90130	00	CWUNO006	194	4	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6	**TT12**	

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
	Project	**Hollandse Kust Noord Wind Park Project**	
	Job	**123A90 - Deck**	
ROSETTI MARINO	Discipline	**STRUCTURE**	
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**
	RosettiDoc.Num.	**123A90MTR001**	Date: 31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90130	00	CWUNO006	195	1	PL20x955,5	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90130	00	CWUNO006	196	2	PL15x295	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90130	00	CWUNO006	197	1	PL25x610	S420MLOZ	860758	170955/1	1723001716	00060	A0376103/A	**T5**	
123A90-FDL-ST-DD-90130	00	CWUNO006	198	1	PL25x610	S420MLOZ	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90130	00	CWUNO006	199	2	PLATE15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT15**	
123A90-FDL-ST-DD-90131	00	CWUNO007	194	4	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6	**TT12**	
123A90-FDL-ST-DD-90131	00	CWUNO007	195	1	PL20x955,5	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90131	00	CWUNO007	196	2	PL15x295	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90131	00	CWUNO007	198	1	PL25x610	S420MLOZ	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90131	00	CWUNO007	199	2	PLATE15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT15**	
123A90-FDL-ST-DD-90131	00	CWUNO007	205	1	PL25x610	S420MLOZ	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90132	00	CWUNO008	194	4	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6	**TT12**	
123A90-FDL-ST-DD-90132	00	CWUNO008	196	2	PL15x295	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90132	00	CWUNO008	198	2	PL25x610	S420MLOZ	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90132	00	CWUNO008	199	2	PLATE15x950	S420MLO	827475	193497/1	1723001716	00090	A0365754/A	**TT15**	
123A90-FDL-ST-DD-90132	00	CWUNO008	206	1	PL20x944	S420MLO	760946	216935/1	1723001495	00030	A0377578	**T32**	
123A90-FDL-ST-DD-90133	00	CWUNO009	200	1	PL25x914	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90133	00	CWUNO009	201	2	PL15x387,5	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90133	00	CWUNO009	202	4	Ø323,9x10,31	API5LX52	1230908		1723001797	00020	B27714/2	**TT13**	
123A90-FDL-ST-DD-90133	00	CWUNO009	203	1	PL40x800	S420MLOZ	952379	194410/1	1723001716	00070	A0376909/A	**T15**	
123A90-FDL-ST-DD-90133	00	CWUNO009	203	1	PL40x800	S420MLOZ	955033	216692/1	1723001495	00010	A0377515	**T16**	
123A90-FDL-ST-DD-90133	00	CWUNO009	204	4	PLATE20x920	S420MLO	861927	170992/1	1723001716	00100	A0376103/A	**TT23**	
123A90-FDL-ST-DD-90134	00	CWUNO010	200	1	PL25x914	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90134	00	CWUNO010	201	2	PL15x387,5	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90134	00	CWUNO010	202	4	Ø323,9x10,31	API5LX52	1230908		1723001797	00020	B27714/2	**TT13**	
123A90-FDL-ST-DD-90134	00	CWUNO010	203	2	PL40x800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90134	00	CWUNO010	204	4	PLATE20x920	S420MLO	861927	170990/1	1723001716	00030	A0376103/A	**TT23**	
123A90-FDL-ST-DD-90135	01	CWUNO011	310	1	SPD800x30	S420MLOZ	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90135	01	CWUNO011	311	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90135	01	CWUNO011	312	1	PL20x800	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	
123A90-FDL-ST-DD-90135	01	CWUNO011	313	1	PL20x900	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90135	01	CWUNO011	314	1	PL15x800	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90135	01	CWUNO011	315	1	PL15x200	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90135	01	CWUNO011	316	2	PL15x182,5	S420MLO	760425	214401/1	1723001495	00040	A0377578	**T35**	
123A90-FDL-ST-DD-90135	01	CWUNO011	317	1	PL15x240	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90135	01	CWUNO011	317	1	PL15x240	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T21**	
123A90-FDL-ST-DD-90135	01	CWUNO011	318	2	PL15x230	S420MLO	760425	214400/1	1723001495	00040	A0377578	**T47**	
123A90-FDL-ST-DD-90135	01	CWUNO011	319	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90135	01	CWUNO011	321	2	PL25x734	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90137	01	CWUNO012	311	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90137	01	CWUNO012	312	1	PL20x800	S420MLO	760946	216929/2	1723001495	00030	A0377578	**T46**	
123A90-FDL-ST-DD-90137	01	CWUNO012	313	1	PL20x900	S420MLO	760946	216935/2	1723001495	00030	A0377578	**T36**	
123A90-FDL-ST-DD-90137	01	CWUNO012	314	1	PL15x800	S420MLO	760333	212990/21	1723001495	00040	A0377515	**T19**	
123A90-FDL-ST-DD-90137	01	CWUNO012	315	1	PL15x200	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90137	01	CWUNO012	316	2	PL15x182,5	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90137	01	CWUNO012	317	2	PL15x240	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90137	01	CWUNO012	318	2	PL15x230	S420MLO	760425	214400/1	1723001495	00040	A0377578	**T47**	
123A90-FDL-ST-DD-90137	01	CWUNO012	319	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90137	01	CWUNO012	321	1	PL25x734	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90137	01	CWUNO012	321	1	PL25x734	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90137	01	CWUNO012	330	1	SPD800x30	S420MLOZ	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90139	01	CWUNO013	311	1	PL40x1800	S420MLOZ	955033	216694/1	1723001495	00010	A0377515	**T42**	
123A90-FDL-ST-DD-90139	01	CWUNO013	312	1	PL20x800	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90139	01	CWUNO013	313	1	PL20x900	S420MLO	760946	216935/1	1723001495	00030	A0377578	**T32**	
123A90-FDL-ST-DD-90139	01	CWUNO013	314	1	PL15x800	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90139	01	CWUNO013	315	1	PL15x200	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90139	01	CWUNO013	316	2	PL15x182,5	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90139	01	CWUNO013	317	2	PL15x240	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90139	01	CWUNO013	318	2	PL15x230	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90139	01	CWUNO013	319	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90139	01	CWUNO013	321	2	PL25x734	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90139	01	CWUNO013	321	2	PL25x734	S420MLO	954770	213963/1	1723001495	00020	A0377578	**T37**	
123A90-FDL-ST-DD-90139	01	CWUNO013	330	1	SPD800x30	S420MLOZ	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90141	01	CWUNO014	310	1	SPD800x30	S420MLOZ	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90141	01	CWUNO014	311	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90141	01	CWUNO014	312	1	PL20x800	S420MLO	760946	216931/1	1723001495	00030	A0377578	**T41**	
123A90-FDL-ST-DD-90141	01	CWUNO014	313	1	PL20x900	S420MLO	760946	216935/1	1723001495	00030	A0377578	**T32**	
123A90-FDL-ST-DD-90141	01	CWUNO014	314	1	PL15x800	S420MLO	760425	214401/2	1723001495	00040	A0377578	**T49**	
123A90-FDL-ST-DD-90141	01	CWUNO014	315	1	PL15x200	S420MLO	760425	214402/2	1723001495	00040	A0377578	**T34**	
123A90-FDL-ST-DD-90141	01	CWUNO014	316	1	PL15x182,5	S420MLO	760420	211441/2	1723001495	00040	A0377515	**T20**	
123A90-FDL-ST-DD-90141	01	CWUNO014	316	1	PL15x182,5	S420MLO	760420	211440/1	1723001495	00040	A0377578	**T23**	
123A90-FDL-ST-DD-90141	01	CWUNO014	317	2	PL15x240	S420MLO	760333	212990/11	1723001495	00040	A0377578	**T24**	
123A90-FDL-ST-DD-90141	01	CWUNO014	318	2	PL15x230	S420MLO	760425	214400/1	1723001495	00040	A0377578	**T47**	
123A90-FDL-ST-DD-90141	01	CWUNO014	318	2	PL15x230	S420MLO	760425	214402/1	1723001495	00040	A0377578	**T48**	
123A90-FDL-ST-DD-90141	01	CWUNO014	319	1	PL40x1800	S420MLOZ	739185	318566/1	1721001673	00170	Q0500695	**T55**	
123A90-FDL-ST-DD-90141	01	CWUNO014	321	1	PL25x734	S420MLO	954770	213965/1	1723001495	00020	A0377578	**T26**	
123A90-FDL-ST-DD-90141	01	CWUNO014	321	1	PL25x734	S420MLO	954770	213954/1	1723001495	00020	A0377578	**T29**	
123A90-FDL-ST-DD-90143	02	CWUPG016	112	2	PL25x300	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90143	02	CWUPG016	113	1	PL15x950	S420MLO	760333	212992/11	1723001495	00040	A0377578	**T22**	
123A90-FDL-ST-DD-90143	02	CWUPG016	149	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90143	02	CWUPG016	151	1	PL10x132,5	S355MLO	486861	13386-01	1721002275	00010	462398-006	**T54**	
123A90-FDL-ST-DD-90144	01	CWUPG010	106	2	PL25x400	S420MLO	860758	170955/2	1723001716	00060	A0376103/A	**T14**	
123A90-FDL-ST-DD-90144	01	CWUPG010	107	1	PL15x958,5	S420MLO	929534	298464/1	1723001716	00080	A0370744/A	**T13**	
123A90-FDL-ST-DD-90144	01	CWUPG010	144	2	PL12x182,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90144	01	CWUPG010	150	6	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90145	00	CWUPG009	106	2	PL25x400	S420MLO	954770	213957/1	1723001495	00020	A0377578	**T27**	
123A90-FDL-ST-DD-90145	00	CWUPG009	107	1	PL15x958,5	S420MLO	929534	298464/1	1723001716	00080	A0370744/A	**T13**	
123A90-FDL-ST-DD-90145	00	CWUPG009	144	2	PL12x182,3	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**					Prepared by							
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**					Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.							
	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**					Document Status:	**Final Version**				Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**												

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90146	01	CWUPG015	110	2	PL25x300	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90146	01	CWUPG015	111	1	PL15x950	S420MLO	760425	214403/2	1723001495	00040	A0377578	**T33**	
123A90-FDL-ST-DD-90146	01	CWUPG015	143	1	PL12x132,5	S355MLO	SB85186	PB86287805	1724000216	00020	231010-FP01PS-0004A1-0015		
123A90-FDL-ST-DD-90146	01	CWUPG015	153	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90147	01	CWUPG046	138	4	PL25x400	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90147	01	CWUPG046	365	1	PL15x950	S420MLO	828193	197381/1	1723001716	00050	A0366080/A	**T2**	
123A90-FDL-ST-DD-90147	01	CWUPG046	790	2	PL25x610	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90147	01	CWUPG046	791	2	Ø406,4x15,88	API5LX52	456780		1721002523	00030	B 20155/1		
123A90-FDL-ST-DD-90147	01	CWUPG046	792	8	PL15x182,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90148	01	CWUPG047	138	4	PL25x400	S420MLO	954770	213959/1	1723001495	00020	A0377578	**T30**	
123A90-FDL-ST-DD-90148	01	CWUPG047	365	1	PL15x950	S420MLO	828193	197381/1	1723001716	00050	A0366080/A	**T2**	
123A90-FDL-ST-DD-90148	01	CWUPG047	790	2	PL25x610	S420MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90148	01	CWUPG047	791	2	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90148	01	CWUPG047	792	8	PL15x182,5	S355MLO	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90149	01	CWLTB001	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB002	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB003	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB004	546	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90149	01	CWLTB005	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB006	337	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB007	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB008	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB009	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB010	337	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB011	546	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90149	01	CWLTB012	338	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90149	01	CWLTB013	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB014	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB015	273	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90149	01	CWLTB016	274	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90149	01	CWLTB018	339	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90150	01	CWLTB019	276	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90150	01	CWLTB020	276	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90150	01	CWLTB021	343	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90150	01	CWLTB022	343	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90150	01	CWLTB023	277	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90150	01	CWLTB024	278	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90150	01	CWLTB025	279	1	IPE240	S355J2	CE248333		1723001808	00040	202277271		
123A90-FDL-ST-DD-90150	01	CWLTB026	279	1	IPE240	S355J2	CE248333		1723001808	00040	202277271		
123A90-FDL-ST-DD-90150	01	CWLTB027	362	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90150	01	CWLTB028	340	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90150	01	CWLTB029	280	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90150	01	CWLTB030	342	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90150	01	CWLTB031	361	1	IPE240	S355J2	CE248333		1723001808	00040	202277271		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
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Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90151	01	CWLTB033	282	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90151	01	CWLTB034	283	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90151	01	CWLTB035	341	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90151	01	CWLTB036	344	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90151	01	CWLTB037	345	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90151	01	CWLTB038	347	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90151	01	CWLTB039	341	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90151	01	CWLTB040	344	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90151	01	CWLTB041	341	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90152	01	CWLTB045	285	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90152	01	CWLTB046	286	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90153	03	CWLTB047	287	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB049	346	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB050	348	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB051	287	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB052	348	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB053	348	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90153	03	CWLTB054	348	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90153	03	CWLTB055	348	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90153	03	CWLTB058	287	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90153	03	CWLTB059	346	1	IPE240	S355J2	CE625809		1723001808	00040	202234741		
123A90-FDL-ST-DD-90153	03	CWLTB060	346	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90153	03	CWLTB063	348	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90153	03	CWLTB064	346	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90154	00	CWLTB065	288	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90154	00	CWLTB066	289	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90154	00	CWLTB067	354	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90154	00	CWLTB068	289	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90154	00	CWLTB069	354	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90155	02	CWLTB070	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB071	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB072	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB073	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB076	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB077	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB078	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB079	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB080	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB081	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB082	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB083	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB084	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB085	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB086	550	1	IPE240	S355J2	73136		1723001808	00040	1450090706		

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123A90-FDL-ST-DD-90155	02	CWLTB087	550	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90155	02	CWLTB089	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB090	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB093	290	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90155	02	CWLTB094	290	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB096	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB097	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB100	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB101	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB102	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB103	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB104	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB105	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB106	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB107	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB108	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB109	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB110	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB112	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB115	355	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90156	03	CWLTB116	356	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90157	02	CWLTB123	297	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90157	02	CWLTB124	298	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90157	02	CWLTB126	298	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90157	02	CWLTB127	298	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90157	02	CWLTB129	298	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90157	02	CWLTB133	298	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB138	301	1	PL10x130	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB139	301	1	PL10x130	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB141	303	1	PL10x107,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB146	306	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB147	306	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB149	306	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90158	03	CWLTB150	306	1	PL10x107,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90159	03	CWLTB154	350	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB155	350	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB156	350	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB157	350	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB158	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB159	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB160	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB161	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB163	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB164	351	1	IPE240	S355J2	142750A		1723001808	00040	156		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90159	03	CWLTB165	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB167	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB169	351	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90159	03	CWLTB170	351	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90159	03	CWLTB171	351	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90159	03	CWLTB171	1030	1	PL10x46,9	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90159	03	CWLTB172	351	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90160	03	CWLTB173	351	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB175	593	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90160	03	CWLTB178	352	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB179	352	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB180	352	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90160	03	CWLTB181	352	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB182	353	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90160	03	CWLTB183	353	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB184	353	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90160	03	CWLTB185	359	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90161	00	CWUSB001	171	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90161	00	CWUSB001	172	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90161	00	CWUSB001	379	1	HEA500	S355J2	141507B		1723001808	00030	1446		
123A90-FDL-ST-DD-90161	00	CWUSB002	176	2	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90161	00	CWUSB002	381	1	HEA500	S355J2	140754A		1723001808	00030	1872		
123A90-FDL-ST-DD-90161	00	CWUSB002	408	1	PL25x300	S355MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90161	00	CWUSB002	409	1	PL15x483,5	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90161	00	CWUSB002	411	3	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90161	00	CWUSB002	412	3	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90161	00	CWUSB040	378	1	HEA500	S355J2	140754A		1723001808	00030	1872		
123A90-FDL-ST-DD-90161	00	CWUSB040	410	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90162	00	CWUSB041	380	1	HEA500	S355J2	66714		1723001808	00030	5000341		
123A90-FDL-ST-DD-90162	00	CWUSB041	411	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90162	00	CWUSB041	412	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90162	00	CWUSB042	381	1	HEA500	S355J2	141507B		1723001808	00030	1589		
123A90-FDL-ST-DD-90162	00	CWUSB042	408	1	PL25x300	S355MLO	954770	213955/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90162	00	CWUSB042	409	1	PL15x483,5	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90162	00	CWUSB042	410	2	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90162	00	CWUSB042	411	3	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90162	00	CWUSB042	412	3	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90162	00	CWUSB043	382	1	HEA500	S355J2	140754A		1723001808	00030	1872		
123A90-FDL-ST-DD-90162	00	CWUSB043	410	3	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90162	00	CWUSB043	411	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90162	00	CWUSB043	412	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90163	00	CWUSB044	383	1	HEA340	S355J2	70494		1723001808	00020	2357/6-2023		
123A90-FDL-ST-DD-90163	00	CWUSB045	384	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		
123A90-FDL-ST-DD-90163	00	CWUSB046	384	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90163	00	CWUSB047	384	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		
123A90-FDL-ST-DD-90164	02	CWUSB003	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90164	02	CWUSB003	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB003	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB003	369	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		
123A90-FDL-ST-DD-90164	02	CWUSB004	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90164	02	CWUSB004	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB004	226	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB004	369	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		
123A90-FDL-ST-DD-90164	02	CWUSB005	179	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90164	02	CWUSB005	225	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB005	368	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90164	02	CWUSB005	416	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB006	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90164	02	CWUSB006	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90164	02	CWUSB006	374	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90164	02	CWUSB006	405	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90165	00	CWUSB007	222	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90165	00	CWUSB007	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90165	00	CWUSB007	374	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90165	00	CWUSB007	405	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90165	00	CWUSB008	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90165	00	CWUSB008	389	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90165	00	CWUSB008	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90165	00	CWUSB008	414	1	PL10x555	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90165	00	CWUSB009	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90165	00	CWUSB009	389	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90165	00	CWUSB009	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90165	00	CWUSB009	414	1	PL10x555	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90165	00	CWUSB010	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90165	00	CWUSB010	389	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90165	00	CWUSB010	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90165	00	CWUSB010	414	1	PL10x555	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB011	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90166	00	CWUSB011	398	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90166	00	CWUSB011	399	1	PL10x312	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB011	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90166	00	CWUSB012	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90166	00	CWUSB012	398	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90166	00	CWUSB012	399	1	PL10x312	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB012	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90166	00	CWUSB013	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90166	00	CWUSB013	398	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90166	00	CWUSB013	399	1	PL10x312	S355MLO	730324439		1723001341	00010	730/0294315		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
	Discipline	**STRUCTURE**			
ROSETTI MARINO	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90166	00	CWUSB013	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90166	00	CWUSB014	254	1	PL10x66,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB014	370	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90166	00	CWUSB015	254	1	PL10x66,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB015	370	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90166	00	CWUSB016	254	1	PL10x66,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90166	00	CWUSB016	370	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90167	00	CWUSB017	260	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90167	00	CWUSB017	261	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90167	00	CWUSB017	394	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90167	00	CWUSB018	260	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90167	00	CWUSB018	261	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90167	00	CWUSB018	397	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90167	00	CWUSB019	366	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90167	00	CWUSB020	366	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90167	00	CWUSB021	366	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90167	00	CWUSB022	366	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90167	00	CWUSB023	367	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90167	00	CWUSB023	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90167	00	CWUSB023	406	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90167	00	CWUSB023	407	1	PL10x322	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90168	00	CWUSB023	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90168	00	CWUSB024	367	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90168	00	CWUSB024	406	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB024	407	1	PL10x322	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90168	00	CWUSB025	368	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90168	00	CWUSB025	375	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB025	376	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB025	377	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90168	00	CWUSB026	369	1	HEA340	S355J2	72415		1723001808	00020	2200/9-2023		
123A90-FDL-ST-DD-90168	00	CWUSB026	375	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB026	376	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB026	377	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90168	00	CWUSB027	371	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90168	00	CWUSB028	371	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90168	00	CWUSB029	371	1	IPE330	S355J2	70799		1723001808	00050	101/7-2023		
123A90-FDL-ST-DD-90168	00	CWUSB030	372	1	HEA340	S355J2	72410		1723001808	00020	2515/9-2023		
123A90-FDL-ST-DD-90168	00	CWUSB030	375	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB030	376	1	PL15x642	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90168	00	CWUSB030	377	2	PL10x135,2	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90169	00	CWUSB031	373	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90169	00	CWUSB032	373	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90169	00	CWUSB033	373	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90169	00	CWUSB034	373	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
	Discipline	**STRUCTURE**			
ROSETTI MARINO	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90169	00	CWUSB035	373	1	IPE330	S355J2	75310		1723001808	00050	524/1-2024		
123A90-FDL-ST-DD-90169	00	CWUSB036	373	1	IPE330	S355J2	75310		1723001808	00050	524/1-2024		
123A90-FDL-ST-DD-90169	00	CWUSB037	373	1	IPE330	S355J2	75310		1723001808	00050	524/1-2024		
123A90-FDL-ST-DD-90169	00	CWUSB038	374	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90169	00	CWUSB038	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90169	00	CWUSB038	405	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90169	00	CWUSB038	406	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90169	00	CWUSB039	374	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90169	00	CWUSB039	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90169	00	CWUSB039	405	1	PL10x442,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90169	00	CWUSB039	406	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90169	00	CWUSB048	385	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90169	00	CWUSB049	386	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90169	00	CWUSB050	386	1	IPE330	S355J2	75310		1723001808	00050	524/1-2024		
123A90-FDL-ST-DD-90170	00	CWUSB051	387	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90170	00	CWUSB052	387	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90170	00	CWUSB053	387	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90170	00	CWUSB054	387	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90170	00	CWUSB055	388	1	IPE330	S355J2	225536		1723001808	00050	01-E-87281		
123A90-FDL-ST-DD-90170	00	CWUSB056	388	1	IPE330	S355J2	75311		1723001808	00050	527/1-2024		
123A90-FDL-ST-DD-90170	00	CWUSB057	388	1	IPE330	S355J2	75311		1723001808	00050	527/1-2024		
123A90-FDL-ST-DD-90170	00	CWUSB058	388	1	IPE330	S355J2	75311		1723001808	00050	527/1-2024		
123A90-FDL-ST-DD-90170	00	CWUSB059	389	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90170	00	CWUSB059	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90170	00	CWUSB059	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90170	00	CWUSB059	414	1	PL10x555	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90170	00	CWUSB060	390	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90170	00	CWUSB060	391	1	PL10x462,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90170	00	CWUSB060	392	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90170	00	CWUSB060	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90171	00	CWUSB061	390	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90171	00	CWUSB061	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90171	00	CWUSB061	403	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90171	00	CWUSB061	413	1	PL10x460	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90171	00	CWUSB062	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90171	00	CWUSB062	398	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90171	00	CWUSB062	399	1	PL10x312	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90171	00	CWUSB062	400	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90171	00	CWUSB063	393	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90171	00	CWUSB063	402	1	PL10x460	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90171	00	CWUSB063	403	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90171	00	CWUSB063	404	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90172	00	CWUSB064	394	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90172	00	CWUSB064	395	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90172	00	CWUSB064	396	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90172	00	CWUSB065	395	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90172	00	CWUSB065	396	1	PL12x72,5	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90172	00	CWUSB065	397	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90172	00	CWUSB066	401	1	IPE330	S355J2	75310		1723001808	00050	524/1-2024		
123A90-FDL-ST-DD-90172	00	CWUSB067	415	1	IPE330	S355J2	70799		1723001808	00050	101/7-2023		
123A90-FDL-ST-DD-90173	02	CWUTB001	427	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90173	02	CWUTB001	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90173	02	CWUTB002	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90173	02	CWUTB002	1151	1	PL10x46,9	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90173	02	CWUTB003	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90173	02	CWUTB003	429	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90173	02	CWUTB004	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90173	02	CWUTB004	429	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90173	02	CWUTB004	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90174	00	CWUTB005	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90174	00	CWUTB005	434	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB006	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90174	00	CWUTB006	434	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB007	417	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB008	418	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90174	00	CWUTB009	418	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90174	00	CWUTB010	419	1	IPE240	S355J2	70716		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB011	420	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB012	420	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB013	420	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB014	420	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90174	00	CWUTB015	420	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90175	02	CWUTB016	421	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB017	421	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB018	421	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB019	421	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB020	422	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90175	02	CWUTB021	422	1	IPE240	S355J2	CE623842		1723001808	00040	202188120		
123A90-FDL-ST-DD-90175	02	CWUTB022	422	1	IPE240	S355J2	CE623842		1723001808	00040	202188120		
123A90-FDL-ST-DD-90175	02	CWUTB023	422	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB024	423	1	IPE240	S355J2	CE623842		1723001808	00040	202188120		
123A90-FDL-ST-DD-90175	02	CWUTB025	423	1	IPE240	S355J2	CE623842		1723001808	00040	202188120		
123A90-FDL-ST-DD-90175	02	CWUTB026	424	1	IPE240	S355J2	70716		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90175	02	CWUTB027	424	1	IPE240	S355J2	70716		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90175	02	CWUTB028	424	1	IPE240	S355J2	70716		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90175	02	CWUTB029	425	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB030	425	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90175	02	CWUTB031	425	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
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Job	**123A90 - Deck**		
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RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

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123A90-FDL-ST-DD-90175	02	CWUTB032	426	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90175	02	CWUTB033	427	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90175	02	CWUTB034	427	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90175	02	CWUTB034	1431	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90175	02	CWUTB035	427	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90176	03	CWUTB036	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB039	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB040	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB043	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB044	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB047	428	1	IPE240	S355J2	70716		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB048	428	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90176	03	CWUTB049	429	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90176	03	CWUTB050	429	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB054	430	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90177	00	CWUTB055	430	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90177	00	CWUTB056	430	1	IPE240	S355J2	70717		1723001808	00040	63/7-2023		
123A90-FDL-ST-DD-90177	00	CWUTB057	430	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90177	00	CWUTB058	430	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90177	00	CWUTB059	430	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90177	00	CWUTB060	430	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90177	00	CWUTB061	430	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90177	00	CWUTB062	430	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90177	00	CWUTB063	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB064	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB065	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB068	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB069	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB070	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB071	430	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90177	00	CWUTB072	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB073	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB074	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB075	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB076	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB077	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB078	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90177	00	CWUTB079	430	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90178	01	CWUTB081	431	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90178	01	CWUTB083	431	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90178	01	CWUTB084	431	1	IPE240	S355J2	141187A		1723001808	00040	9148		
123A90-FDL-ST-DD-90178	01	CWUTB085	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB086	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB087	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90178	01	CWUTB089	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB091	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB093	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB095	431	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90178	01	CWUTB096	432	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90178	01	CWUTB097	432	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90178	01	CWUTB098	432	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90178	01	CWUTB099	432	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90185	01	CWUTB102	435	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90185	01	CWUTB103	508	1	IPE240	S355J2	71643		1723001808	00040	1450082633		
123A90-FDL-ST-DD-90185	01	CWUTB104	436	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90185	01	CWUTB105	503	1	IPE240	S355J2	71643		1723001808	00040	1450082633		
123A90-FDL-ST-DD-90185	01	CWUTB106	437	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90185	01	CWUTB107	437	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB108	438	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB109	438	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB110	439	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB111	439	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB112	440	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90186	00	CWUTB113	440	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90187	01	CWBR011	447	1	Ø355,6x12,7	API5LX52	72583		1723001797	00040	B28506/1		
123A90-FDL-ST-DD-90187	01	CWBR012	447	1	Ø355,6x12,7	API5LX52	72583		1723001797	00040	B28506/1		
123A90-FDL-ST-DD-90187	01	CWLG005	442	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90187	01	CWLG006	442	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90187	01	CWLG017	453	1	Ø406,4x21,44	API5LX52	72580		1723001797	00060	B28684/1		
123A90-FDL-ST-DD-90187	01	CWLG018	453	1	Ø406,4x21,44	API5LX52	72580		1723001797	00060	B28684/1		
123A90-FDL-ST-DD-90188	00	CWBR015	448	1	SPD600x20	S420MLO	53565	147465/1	1723001802	00050	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90188	00	CWBR025	452	1	SPD600x20	S420MLO	24964	147477/1	1723001802	00050	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90188	00	CWLG011	449	1	SPD800x20	S420MLO	861927	170991/1	1723001802	00060	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90188	00	CWLG013	449	1	SPD800x20	S420MLO	861927	170990/1	1723001802	00060	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90189	00	CWLG001	441	1	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23		
123A90-FDL-ST-DD-90189	00	CWLG003	441	1	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23		
123A90-FDL-ST-DD-90190	00	CWBR016	448	1	SPD600x20	S420MLO	53565	147477/1	1723001802	00050	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90190	00	CWBR026	452	1	SPD600x20	S420MLO	24964	147478/1	1723001802	00050	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90190	00	CWLG012	449	1	SPD800x20	S420MLO	861927	170990/1	1723001802	00060	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90190	00	CWLG014	449	1	SPD800x20	S420MLO	861927	170990/1	1723001802	00060	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90191	01	CWBR013	447	1	Ø355,6x12,7	API5LX52	72583		1723001797	00040	B28506/1		
123A90-FDL-ST-DD-90191	01	CWBR014	447	1	Ø355,6x12,7	API5LX52	72583		1723001797	00040	B28506/1		
123A90-FDL-ST-DD-90191	01	CWLG007	442	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90191	01	CWLG008	514	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90191	01	CWLG008	520	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90191	01	CWLG015	453	1	Ø406,4x21,44	API5LX52	72580		1723001797	00060	B28684/1		
123A90-FDL-ST-DD-90191	01	CWLG016	453	1	Ø406,4x21,44	API5LX52	72580		1723001797	00060	B28684/1		
123A90-FDL-ST-DD-90192	02	CWBR001	518	1	SPD550x20	S420MLO	24695	147524/1	1723001802	00040	2023263/VIS/03 rev. 00		

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SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90192	02	CWBR001	1901	1	SPD550x20	S420MLO	24695	147524/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90192	02	CWBR001	1902	1	SPD550x20	S420MLO	24695	147524/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90192	02	CWBR003	444	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90192	02	CWBR004	444	1	Ø323,9x12,7	API5LX52	1240954		1724000568	00040	24C2993		
123A90-FDL-ST-DD-90192	02	CWBR007	445	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90192	02	CWBR008	445	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90193	02	CWBR017	455	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90193	02	CWBR018	450	1	Ø406,4x20,62	API5LX52	899081		1724000419	00020	26/2024/TUV		
123A90-FDL-ST-DD-90193	02	CWBR021	451	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90193	02	CWBR027	454	1	SPD550x20	S420MLO	24694	147474/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90193	02	CWBR027	519	1	SPD550x20	S420MLO	24694	147474/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90194	02	CWLG002	441	1	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23		
123A90-FDL-ST-DD-90194	02	CWLG004	515	2	Ø273,1x11,13	API5LX52	56110K		1723001797	00010	73555/23		
123A90-FDL-ST-DD-90194	02	CWLG009	446	1	Ø323,9x19,05	API5LX52	52588		1724000284	00010	D2367/1		
123A90-FDL-ST-DD-90194	02	CWLG010	446	1	Ø323,9x19,05	API5LX52	52588		1724000284	00010	D2367/1		
123A90-FDL-ST-DD-90195	01	CWBR002	443	1	SPD550x20	S420MLO	24694	147476/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90195	01	CWBR002	518	1	SPD550x20	S420MLO	24694	147476/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90195	01	CWBR005	444	1	Ø323,9x12,7	API5LX52	1240954		1724000568	00040	24C2993		
123A90-FDL-ST-DD-90195	01	CWBR006	444	1	Ø323,9x12,7	API5LX52	1240954		1724000568	00040	24C2993		
123A90-FDL-ST-DD-90195	02	CWBR023	1688	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90195	02	CWBR023	1689	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90195	02	CWBR024	1688	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90195	02	CWBR024	1689	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90196	01	CWBR009	445	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90196	01	CWBR010	445	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90196	01	CWBR019	455	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90196	01	CWBR020	455	1	Ø406,4x12,7	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90196	01	CWBR028	516	1	SPD550x20	S420MLO	24694	147527/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90196	01	CWBR028	517	1	SPD550x20	S420MLO	24694	147527/1	1723001802	00040	2023263/VIS/03 rev. 00		
123A90-FDL-ST-DD-90205	01	CWLSB120	357	1	IPE330	S355J2	225533		1724000079	00570	01-E-86957		
123A90-FDL-ST-DD-90205	01	CWLSB120	560	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90205	01	CWLSB120	561	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90205	01	CWLSB120	562	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90205	01	CWLSB121	357	1	IPE330	S355J2	225533		1724000079	00570	01-E-86957		
123A90-FDL-ST-DD-90205	01	CWLSB121	560	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90205	01	CWLSB121	561	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90205	01	CWLSB121	562	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90205	01	CWLSB122	357	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90205	01	CWLSB122	560	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90205	01	CWLSB122	561	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90205	01	CWLSB122	562	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90205	01	CWLSB123	357	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90205	01	CWLSB123	560	1	PL10x512,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90205	01	CWLSB123	561	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
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123A90-FDL-ST-DD-90205	01	CWLSB123	562	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90205	01	CWLSB124	360	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90205	01	CWLSB147	360	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90206	01	CWLSB118	363	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB125	363	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB126	363	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB127	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB128	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB129	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB130	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB131	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB132	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB133	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB134	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB135	541	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90206	01	CWLSB137	547	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90206	01	CWLSB138	547	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90206	01	CWLSB139	547	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90206	01	CWLSB141	548	1	HEA340	S355J2	61769		1723001808	00020	4837376		
123A90-FDL-ST-DD-90206	01	CWLSB149	363	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB142	549	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90207	00	CWLSB143	549	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90207	00	CWLSB144	549	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90207	00	CWLSB145	549	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90207	00	CWLSB146	551	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90207	00	CWLSB148	555	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90207	00	CWLSB150	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB151	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB152	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB153	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB154	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB155	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB156	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB157	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB158	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB159	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB160	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90207	00	CWLSB161	563	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB136	544	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90208	00	CWLSB162	564	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB163	564	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB164	564	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB165	564	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB166	564	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90208	00	CWLSB167	565	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB168	566	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB169	567	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB170	568	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB171	569	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB172	569	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB173	570	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB174	570	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90208	00	CWLSB175	544	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90209	01	CWUSB068	028	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB069	028	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB070	028	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB071	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB072	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB073	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB074	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB075	055	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB077	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB077	228	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90209	01	CWUSB077	229	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90209	01	CWUSB077	255	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90209	01	CWUSB077	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90209	01	CWUSB077	464	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90209	01	CWUSB146	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90209	01	CWUSB147	032	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90210	01	CWUSB078	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90210	01	CWUSB078	257	2	PL15x120	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90210	01	CWUSB078	463	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90210	01	CWUSB078	464	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90210	01	CWUSB078	465	1	HEA340	S355J2	61130		1723001808	00020	4821456		
123A90-FDL-ST-DD-90210	01	CWUSB078	466	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90210	01	CWUSB079	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90210	01	CWUSB079	257	2	PL15x120	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90210	01	CWUSB079	463	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90210	01	CWUSB079	465	1	HEA340	S355J2	61229		1723001808	00020	4814334		
123A90-FDL-ST-DD-90210	01	CWUSB079	466	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90210	01	CWUSB079	467	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90210	01	CWUSB080	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90210	01	CWUSB080	231	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90210	01	CWUSB080	328	1	IPE330	S355J2	141202A		1723001808	00050	1422		
123A90-FDL-ST-DD-90210	01	CWUSB080	478	1	PL10x460	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90211	02	CWUSB081	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90211	02	CWUSB081	468	1	IPE330	S355J2	70799		1723001808	00050	101/7-2023		
123A90-FDL-ST-DD-90211	02	CWUSB081	474	1	PL10x460	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

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SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
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Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90211	02	CWUSB081	475	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90211	02	CWUSB082	223	2	PL8x66,2	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90211	02	CWUSB082	475	1	PL15x160	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90211	02	CWUSB082	477	1	IPE330	S355J2	131660A		1723001808	00050	661		
123A90-FDL-ST-DD-90211	02	CWUSB082	478	1	PL10x460	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90211	02	CWUSB083	456	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90211	02	CWUSB084	457	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90211	02	CWUSB084	484	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90211	02	CWUSB084	1433	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB085	457	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90212	02	CWUSB085	483	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB085	484	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB086	457	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90212	02	CWUSB086	484	1	PL10x134	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB086	1433	1	PL10x134	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB087	458	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90212	02	CWUSB088	458	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90212	02	CWUSB089	458	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90212	02	CWUSB089	1149	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB090	458	1	HEA340	S355J2	76634		1723001808	00020	479/2-2024		
123A90-FDL-ST-DD-90212	02	CWUSB091	458	1	HEA340	S355J2	68674		1723001808	00020	2209/4-2023		
123A90-FDL-ST-DD-90212	02	CWUSB091	1149	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90212	02	CWUSB092	458	1	HEA340	S355J2	68674		1723001808	00020	2209/4-2023		
123A90-FDL-ST-DD-90212	02	CWUSB093	458	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90212	02	CWUSB094	458	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90213	01	CWUSB095	459	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90213	01	CWUSB096	459	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90213	01	CWUSB097	459	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90213	01	CWUSB097	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90213	01	CWUSB098	459	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90213	01	CWUSB098	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90213	01	CWUSB099	459	1	HEA340	S355J2	CE245303		1723001808	00020	202199701		
123A90-FDL-ST-DD-90213	01	CWUSB099	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90214	02	CWUSB100	459	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90214	02	CWUSB100	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90214	02	CWUSB101	460	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90214	02	CWUSB102	460	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90214	02	CWUSB102	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90214	02	CWUSB103	460	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90214	02	CWUSB103	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90214	02	CWUSB104	460	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90214	02	CWUSB104	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB105	460	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90215	02	CWUSB105	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
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Project	**Hollandse Kust Noord Wind Park Project**		
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DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90215	02	CWUSB106	460	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90215	02	CWUSB106	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB107	460	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90215	02	CWUSB107	1432	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB108	460	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90215	02	CWUSB108	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB109	460	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90215	02	CWUSB109	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB110	460	1	HEA340	S355J2	139893A		1723001808	00020	3296		
123A90-FDL-ST-DD-90215	02	CWUSB110	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90215	02	CWUSB111	460	1	HEA340	S355J2	139893A		1723001808	00020	3296		
123A90-FDL-ST-DD-90216	02	CWUSB112	460	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90216	02	CWUSB112	482	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90216	02	CWUSB113	460	1	HEA340	S355J2	72410		1723001808	00020	2198/9-2023		
123A90-FDL-ST-DD-90216	02	CWUSB113	482	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90216	02	CWUSB114	461	1	HEA340	S355J2	129460A		1723001808	00020	2284		
123A90-FDL-ST-DD-90216	02	CWUSB117	462	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90216	02	CWUSB118	469	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90216	02	CWUSB119	470	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90216	02	CWUSB120	471	1	IPE330	S355J2	139269		1724000079	00230	145		
123A90-FDL-ST-DD-90216	02	CWUSB121	472	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90216	02	CWUSB122	473	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90217	01	CWUSB123	476	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90217	01	CWUSB124	476	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90217	01	CWUSB125	476	1	HEA500	S355J2	46176		1723001808	00030	4736128		
123A90-FDL-ST-DD-90217	01	CWUSB126	476	1	HEA500	S355J2	24958		1723001808	00030	44448989		
123A90-FDL-ST-DD-90217	01	CWUSB127	479	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90217	01	CWUSB128	480	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90217	01	CWUSB129	480	1	HEA340	S355J2	68668		1723001808	00020	1732/4-2023		
123A90-FDL-ST-DD-90217	01	CWUSB131	480	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90217	01	CWUSB132	480	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90217	01	CWUSB133	481	1	HEA340	S355J2	129460A		1723001808	00020	2284		
123A90-FDL-ST-DD-90217	01	CWUSB134	499	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90217	01	CWUSB135	499	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90217	01	CWUSB136	500	1	HEA340	S355J2	CE245303		1723001808	00020	202199701		
123A90-FDL-ST-DD-90217	01	CWUSB137	500	1	HEA340	S355J2	76634		1723001808	00020	479/2-2024		
123A90-FDL-ST-DD-90217	01	CWUSB151	499	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90217	01	CWUSB152	499	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90217	01	CWUSB153	500	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90217	01	CWUSB154	500	1	HEA340	S355J2	76634		1723001808	00020	479/2-2024		
123A90-FDL-ST-DD-90219	02	CWUSB148	179	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90219	02	CWUSB148	257	2	PL12x120	S355MLO	SU06080	PP399601/01	1723002082	00020	230807-FP01KS-0019A1-0001		
123A90-FDL-ST-DD-90219	02	CWUSB148	522	1	PL15x300	S355MLO	2355344	23EG005622	1723000953	00040	54ML210723_REV.01		
123A90-FDL-ST-DD-90219	02	CWUSB148	523	1	PL15x645	S355MLO	760420	211440/1	1723001495	00040	A0377578		

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	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90219	02	CWUSB148	524	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90219	02	CWUSB148	525	1	PL30x430	S355MLO	859729	156195/1	1723001716	00020	A0375876/A		
123A90-FDL-ST-DD-90219	02	CWUSB149	179	2	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90219	02	CWUSB149	528	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90219	02	CWUSB150	179	2	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90219	02	CWUSB150	530	1	HEA340	S355J2	CE245715		1723001808	00020	202212396		
123A90-FDL-ST-DD-90220	01	CWUSB155	505	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB155	531	1	HEA340	S355J2	76635		1723001808	00020	486/2-2024		
123A90-FDL-ST-DD-90220	01	CWUSB156	505	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB156	531	1	HEA340	S355J2	76635		1723001808	00020	486/2-2024		
123A90-FDL-ST-DD-90220	01	CWUSB157	506	1	PL10x182,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB158	506	1	PL10x182,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB159	506	1	PL10x182,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB160	506	1	PL10x182,5	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB161	507	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB162	507	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB163	507	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90220	01	CWUSB164	507	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90221	01	CWUSB175	526	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90221	01	CWUSB176	527	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90221	01	CWUSB177	528	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90221	01	CWUSB177	529	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB178	528	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90222	01	CWUSB178	529	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB179	532	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB180	532	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB181	533	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB182	533	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90222	01	CWUSB183	534	1	HEA340	S355J2	139893A		1723001808	00020	3296		
123A90-FDL-ST-DD-90222	01	CWUSB184	534	1	HEA340	S355J2	139893A		1723001808	00020	3296		
123A90-FDL-ST-DD-90222	01	CWUSB185	534	1	HEA340	S355J2	139893A		1723001808	00020	3296		
123A90-FDL-ST-DD-90222	01	CWUSB186	534	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90223	02	CWUTB100	433	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90223	02	CWUTB101	433	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90223	02	CWUTB116	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB116	502	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90223	02	CWUTB117	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB117	502	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90223	02	CWUTB118	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB119	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB120	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB121	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB122	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB123	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		

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	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
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DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90223	02	CWUTB124	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB125	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB126	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB127	307	1	PL10x132,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB173	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90223	02	CWUTB174	307	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90224	00	CWUTB128	485	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90224	00	CWUTB129	486	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90224	00	CWUTB130	487	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90224	00	CWUTB131	488	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90224	00	CWUTB132	489	1	IPE240	S355J2	73172		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90224	00	CWUTB133	490	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90224	00	CWUTB134	491	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90224	00	CWUTB135	491	1	IPE240	S355J2	142747B		1723001808	00040	63		
123A90-FDL-ST-DD-90225	03	CWUTB136	492	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90225	03	CWUTB137	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB138	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB138	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90225	03	CWUTB139	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB140	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB140	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90225	03	CWUTB141	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB141	1625	2	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90225	03	CWUTB142	493	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90225	03	CWUTB143	494	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90225	03	CWUTB143	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90225	03	CWUTB144	494	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90225	03	CWUTB145	494	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90225	03	CWUTB145	1151	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90225	03	CWUTB146	494	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90226	01	CWUTB150	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB151	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB152	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB153	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB154	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB155	498	1	IPE240	S355J2	70717		1723001808	00040	2790/6-2023		
123A90-FDL-ST-DD-90226	01	CWUTB156	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90226	01	CWUTB157	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90226	01	CWUTB158	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90226	01	CWUTB159	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90226	01	CWUTB160	501	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90226	01	CWUTB171	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90226	01	CWUTB171	1625	2	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90226	01	CWUTB172	498	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		

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123A90-FDL-ST-DD-90226	01	CWUTB175	537	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90226	01	CWUTB176	538	1	IPE240	S355J2	141185A		1723001808	00040	9125		
123A90-FDL-ST-DD-90227	00	CWUTB147	495	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90227	00	CWUTB148	496	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90227	00	CWUTB161	504	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90227	00	CWUTB162	509	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90227	00	CWUTB177	495	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90227	00	CWUTB178	496	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90228	03	CWLTB190	571	1	IPE240	S355J2	141184A		1723001808	00040	9125		
123A90-FDL-ST-DD-90228	03	CWLTB191	299	1	PL10x46,9	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90228	03	CWLTB191	571	1	IPE240	S355J2	141184A		1723001808	00040	9125		
123A90-FDL-ST-DD-90228	03	CWLTB192	299	1	PL10x46,9	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90228	03	CWLTB192	571	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90228	03	CWLTB193	571	1	IPE240	S355J2	71643		1723001808	00040	1450082633		
123A90-FDL-ST-DD-90228	03	CWLTB195	573	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90228	03	CWLTB196	574	1	IPE240	S355J2	73136		1723001808	00040	1450090706		
123A90-FDL-ST-DD-90228	03	CWLTB199	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90228	03	CWLTB199	577	1	IPE240	S355J2	142750A		1723001808	00040	156		
123A90-FDL-ST-DD-90228	03	CWLTB200	299	1	PL10x46,9	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90228	03	CWLTB200	578	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90229	01	CWLTB194	572	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90229	01	CWLTB201	545	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90238	01	CWLSB178	584	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90238	01	CWLSB179	585	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90238	01	CWLSB180	586	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90239	01	CWLTB208	588	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90239	01	CWLTB209	592	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90353	01	CWULT001	943	1	SPD820x40	S420MLOZ	952379	194403/1	1723001716	00120	A0376909/A		
123A90-FDL-ST-DD-90353	01	CWULT001	944	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT001	945	2	PL25x740	S420MLO	869272	247890/2	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90353	01	CWULT001	946	1	PL10x800	S420MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90353	01	CWULT001	947	2	PL25x950	S420MLO	869272	247890/2	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90353	01	CWULT001	948	2	PL25x200	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT001	949	4	PL25x299,5	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT001	1037	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT002	943	1	SPD820x40	S420MLOZ	952379	194403/1	1723001716	00120	A0376909/A		
123A90-FDL-ST-DD-90353	01	CWULT002	944	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT002	945	2	PL25x740	S420MLO	869272	249357/1	1724000081	00110	A0378546		
123A90-FDL-ST-DD-90353	01	CWULT002	946	1	PL10x800	S420MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90353	01	CWULT002	947	2	PL25x950	S420MLO	869272	247890/2	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90353	01	CWULT002	948	2	PL25x200	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT002	949	4	PL25x299,5	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT002	1037	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT003	943	1	SPD820x40	S420MLOZ	952379	194403/1	1723001716	00120	A0376909/A		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90353	01	CWULT003	944	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT003	945	2	PL25x740	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT003	946	1	PL10x800	S420MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90353	01	CWULT003	947	2	PL25x950	S420MLO	868836	257249/1	1724000173	00050	A0379065		
123A90-FDL-ST-DD-90353	01	CWULT003	948	2	PL25x200	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT003	949	4	PL25x299,5	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT003	1037	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT004	943	1	SPD820x40	S420MLOZ	952379	194403/1	1723001716	00120	A0376909/A		
123A90-FDL-ST-DD-90353	01	CWULT004	944	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90353	01	CWULT004	945	2	PL25x740	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT004	946	1	PL10x800	S420MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90353	01	CWULT004	947	2	PL25x950	S420MLO	868836	257249/1	1724000173	00050	A0379065		
123A90-FDL-ST-DD-90353	01	CWULT004	948	2	PL25x200	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT004	949	4	PL25x299,5	S420MLO	954770	213961/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90353	01	CWULT004	1037	1	SPD700x35	S420MLOZ	926774	281728-1	1724000112	00070	A0370161/A		
123A90-FDL-ST-DD-90364	00	CWLSB181	974	1	IPE330	S355J2	139269		1724000079	00250	145		
123A90-FDL-ST-DD-90364	00	CWLSB181	978	1	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90364	00	CWLSB182	974	1	IPE330	S355J2	225536		1723001808	00050	01-E-86957		
123A90-FDL-ST-DD-90364	00	CWLSB182	978	1	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90364	00	CWLSB183	975	1	IPE330	S355J2	139269		1724000079	00190	249		
123A90-FDL-ST-DD-90364	00	CWLSB184	975	1	IPE330	S355J2	139269		1724000079	00190	249		
123A90-FDL-ST-DD-90364	00	CWLSB185	976	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90364	00	CWLSB186	976	1	PL10x130	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90364	00	CWLSB187	977	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90364	00	CWLSB188	977	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB189	978	2	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB189	990	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90365	00	CWLSB190	978	2	PL10x66,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB190	990	1	IPE330	S355J2	28710		1723001808	00050	4512904		
123A90-FDL-ST-DD-90365	00	CWLSB191	979	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB192	980	1	HEA340	S355J2	CE245303		1723001808	00020	202199701		
123A90-FDL-ST-DD-90365	00	CWLSB192	984	1	PL10x135,3	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB193	981	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB194	981	1	PL10x107,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90365	00	CWLSB195	982	1	HEA340	S355J2	CE245303		1723001808	00020	202199701		
123A90-FDL-ST-DD-90365	00	CWLSB195	984	1	PL10x135,3	S355MLO	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB196	983	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90366	00	CWLSB197	985	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90366	00	CWLSB198	986	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB199	986	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB200	987	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB201	987	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB202	988	1	HEA340	S355J2	138092B		1723001808	00020	1559		
123A90-FDL-ST-DD-90366	00	CWLSB203	989	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90366	00	CWLSB204	989	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB205	991	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB206	991	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB207	992	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB208	992	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB209	993	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90366	00	CWLSB210	993	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB211	994	1	IPE330	S355J2	225533		1724000079	00650	01-E-86957		
123A90-FDL-ST-DD-90367	00	CWLSB212	994	1	IPE330	S355J2	225533		1724000079	00650	01-E-86957		
123A90-FDL-ST-DD-90367	00	CWLSB213	995	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90367	00	CWLSB214	995	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90367	00	CWLSB215	996	1	HEA340	S355J2	CE245303		1723001808	00020	202199701		
123A90-FDL-ST-DD-90367	00	CWLSB216	997	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB217	997	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB218	998	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB219	999	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB220	1000	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB221	1000	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90367	00	CWLSB222	1000	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB223	1023	1	HEA340	S355J2	CE245302		1723001808	00020	202203850		
123A90-FDL-ST-DD-90368	00	CWLSB224	1024	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB225	1024	1	PL10x180	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB226	1025	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90368	00	CWLSB227	1026	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB228	1026	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB229	1026	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB230	1026	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB231	1026	1	PL10x132,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90368	00	CWLSB232	1027	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90368	00	CWLSB233	1028	1	IPE330	S355J2	219914		1723001808	00050	01-E-84027		
123A90-FDL-ST-DD-90369	00	CWLTB216	1034	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90369	00	CWLTB217	1034	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90369	00	CWLTB218	1036	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90369	00	CWLTB219	1036	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90369	00	CWLTB220	1035	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90369	00	CWLTB221	1035	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90369	00	CWLTB222	1029	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90369	00	CWLTB223	1029	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90369	00	CWLTB224	1031	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90369	00	CWLTB225	1031	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90369	00	CWLTB226	1032	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90369	00	CWLTB227	1033	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB228	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB229	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		

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	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
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123A90-FDL-ST-DD-90370	00	CWLTB230	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB231	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB232	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB233	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB234	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB235	1038	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB236	1039	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB236	1044	2	PL8x51,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB237	1039	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB237	1044	2	PL8x51,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB238	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB239	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB240	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB241	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB242	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB243	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB244	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB245	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB246	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB247	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB248	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB249	1040	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB250	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB251	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB252	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB253	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB254	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB255	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB256	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB257	1041	1	PL8x66,2	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90370	00	CWLTB258	1042	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB259	1042	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90370	00	CWLTB260	1043	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90370	00	CWLTB261	1043	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90391	00	CWWN003	881	1	IPE330	S355J2	139269		1724000079	00210	249		
123A90-FDL-ST-DD-90391	00	CWWN003	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90391	00	CWWN003	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90391	00	CWWN003	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90391	00	CWWN018	883	1	HEA340	S355J2	80174		1724000079	00390	5019635		
123A90-FDL-ST-DD-90391	00	CWWN019	883	1	HEA340	S355J2	80174		1724000079	00390	5019635		
123A90-FDL-ST-DD-90391	00	CWWN024	886	1	HEA340	S355J2	80174		1724000079	00010	5019559		
123A90-FDL-ST-DD-90391	00	CWWN025	886	1	HEA340	S355J2	80174		1724000079	00010	5019559		
123A90-FDL-ST-DD-90391	00	CWWN025	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90391	00	CWWN025	1074	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90392	00	CWWN026	887	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90392	00	CWWN027	887	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90392	00	CWWN027	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90392	00	CWWN027	922	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90393	00	CWWN029	888	1	PL15x200,2	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90393	00	CWWN029	889	1	PL25x360	S355J2	23303242	27F.65.04/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90393	00	CWWN029	891	1	PL15x291	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90393	00	CWWN029	892	1	PL15x134	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90393	00	CWWN029	896	2	PL15x145,3	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90393	00	CWWN029	897	1	PL15x136,7	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90393	00	CWWN029	899	1	HEA340	S355J2	61849		1724000079	00040	4828653		
123A90-FDL-ST-DD-90393	00	CWWN029	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90393	00	CWWN029	939	1	PL15x291	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90394	00	CWWN030	888	1	PL15x200,2	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90394	00	CWWN030	889	1	PL25x360	S355J2	23303242	27F.65.04/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90394	00	CWWN030	891	1	PL15x291	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90394	00	CWWN030	892	1	PL15x134	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90394	00	CWWN030	896	2	PL15x145,3	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90394	00	CWWN030	897	1	PL15x136,8	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90394	00	CWWN030	899	1	HEA340	S355J2	61849		1724000079	00040	4828653		
123A90-FDL-ST-DD-90394	00	CWWN030	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90394	00	CWWN030	939	1	PL15x291	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90395	01	CWWN031	890	2	PL15x128	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90395	01	CWWN031	893	1	PL15x128	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90395	01	CWWN031	894	2	PL10x100	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90395	01	CWWN031	895	2	PL10x77	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90396	01	CWWN032	890	2	PL15x128	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90396	01	CWWN032	893	1	PL15x128	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90396	01	CWWN032	894	2	PL10x100	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90396	01	CWWN032	895	2	PL10x77	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90397	00	CWWN036	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90397	00	CWWN036	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90397	00	CWWN036	937	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90397	00	CWWN037	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90397	00	CWWN037	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90397	00	CWWN037	937	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90397	00	CWWN038	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90397	00	CWWN038	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90397	00	CWWN038	937	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90397	00	CWWN039	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90397	00	CWWN039	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90397	00	CWWN039	937	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90398	00	CWWN042	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90398	00	CWWN042	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90398	00	CWWN042	938	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90398	00	CWWN043	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90398	00	CWWN043	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90398	00	CWWN043	938	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90399	00	CWWN001	880	1	IPE330	S355J2	139269		1724000079	00200	249		
123A90-FDL-ST-DD-90399	00	CWWN001	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN001	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN001	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN002	880	1	IPE330	S355J2	139269		1724000079	00200	249		
123A90-FDL-ST-DD-90399	00	CWWN002	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN002	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN002	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90399	00	CWWN020	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90399	00	CWWN021	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90399	00	CWWN046	904	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90400	00	CWWN047	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90400	00	CWWN053	904	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90400	00	CWWN053	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90400	00	CWWN053	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90400	00	CWWN054	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90400	00	CWWN054	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90400	00	CWWN054	1083	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90400	00	CWWN055	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90401	00	CWWN048	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90401	00	CWWN048	918	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90401	00	CWWN048	919	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90401	00	CWWN049	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90401	00	CWWN049	918	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90401	00	CWWN049	919	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90402	00	CWWN050	903	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90402	00	CWWN050	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90402	00	CWWN050	919	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90402	00	CWWN051	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90402	00	CWWN051	918	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90402	00	CWWN051	932	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90403	00	CWWN052	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90403	00	CWWN052	918	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90403	00	CWWN052	933	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90403	00	CWWN072	903	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90403	00	CWWN072	919	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90403	00	CWWN072	934	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90404	00	CWWN056	907	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90404	00	CWWN057	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90404	00	CWWN058	908	1	IPE330	S355J2	139269		1724000079	00180	249		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90404	00	CWWN058	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90404	00	CWWN058	1083	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90404	00	CWWN076	907	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90405	00	CWWN073	903	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90405	00	CWWN073	933	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90405	00	CWWN073	934	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90405	00	CWWN074	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90405	00	CWWN074	918	1	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90405	00	CWWN074	933	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90405	00	CWWN075	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90405	00	CWWN075	918	1	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90405	00	CWWN075	933	2	PL15x430	S355J2	760420	211441/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90406	00	CWWN022	885	1	PL25x360	S355J2	23303242	27F.65.04/A	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90406	00	CWWN022	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90406	00	CWWN022	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90406	00	CWWN022	914	2	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90406	00	CWWN022	1072	1	HEA340	S355J2	65218		1724000079	00040	900/1-2023		
123A90-FDL-ST-DD-90407	00	CWWN023	885	1	PL25x360	S355J2	23303242	27F.65.04/A	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90407	00	CWWN023	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90407	00	CWWN023	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90407	00	CWWN023	914	2	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90407	00	CWWN023	1072	1	HEA340	S355J2	65219		1724000079	00040	1407/12-2022		
123A90-FDL-ST-DD-90408	00	CWWN028	900	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90408	00	CWWN028	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90408	00	CWWN028	922	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90408	00	CWWN033	898	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90408	00	CWWN034	898	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90408	00	CWWN034	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90408	00	CWWN034	1071	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90409	00	CWWN035	900	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90409	00	CWWN062	913	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90409	00	CWWN069	916	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90409	00	CWWN069	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90409	00	CWWN069	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90409	00	CWWN069	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90410	00	CWWN040	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90410	00	CWWN040	902	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90410	00	CWWN040	911	1	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90410	00	CWWN040	912	1	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90410	00	CWWN041	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90410	00	CWWN041	902	1	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90410	00	CWWN041	911	1	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90410	00	CWWN041	912	1	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90411	00	CWWN044	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90411	00	CWWN044	902	1	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90411	00	CWWN044	929	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90411	00	CWWN045	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90411	00	CWWN045	902	1	Ø273,1x9,27	S355J2	70888		1722000931	00050	B 26116/1		
123A90-FDL-ST-DD-90411	00	CWWN045	930	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90412	00	CWWN004	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN005	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN006	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN007	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN008	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN009	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN010	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN011	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN012	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN013	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN014	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN015	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN016	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90412	00	CWWN017	882	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90413	00	CWWN059	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90413	00	CWWN060	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90413	00	CWWN061	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90413	00	CWWN063	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90413	00	CWWN064	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90413	00	CWWN065	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90413	00	CWWN066	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90413	00	CWWN067	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90413	00	CWWN068	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90414	00	CWWN070	917	1	Ø141,3x6,55	API5LX52	WK22C105842		1723001270	00010	22GC013082-1		
123A90-FDL-ST-DD-90414	00	CWWN070	935	1	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90414	00	CWWN070	1091	2	PL8x121,3	S355J2	730316224	1957051	1723002024	00030	730/0294762		
123A90-FDL-ST-DD-90414	00	CWWN071	917	1	Ø141,3x6,55	API5LX52	WK22C105842		1723001270	00010	22GC013082-1		
123A90-FDL-ST-DD-90414	00	CWWN071	935	1	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90414	00	CWWN071	1091	2	PL8x121,3	S355J2	730316224	1957051	1723002024	00030	730/0294762		
123A90-FDL-ST-DD-90415	00	CWWN077	925	2	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90415	00	CWWN077	926	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90415	00	CWWN077	936	4	PL8x148,3	S355J2	730316224	1957051	1723002024	00030	730/0294762		
123A90-FDL-ST-DD-90418	00	CWWS003	881	1	IPE330	S355J2	139269		1724000079	00210	249		
123A90-FDL-ST-DD-90418	00	CWWS003	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90418	00	CWWS003	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90418	00	CWWS003	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90418	00	CWWS018	883	1	HEA340	S355J2	80174		1724000079	00390	5019635		
123A90-FDL-ST-DD-90418	00	CWWS019	883	1	HEA340	S355J2	80174		1724000079	00390	5019635		
123A90-FDL-ST-DD-90418	00	CWWS023	886	1	HEA340	S355J2	80174		1724000079	00010	5019559		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90419	00	CWWS024	886	1	HEA340	S355J2	80174		1724000079	00010	5019559		
123A90-FDL-ST-DD-90419	00	CWWS024	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90419	00	CWWS024	922	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90419	00	CWWS025	887	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90419	00	CWWS079	887	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90419	00	CWWS079	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90419	00	CWWS079	1074	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90420	00	CWWS026	888	1	PL15x200,2	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90420	00	CWWS026	889	1	PL25x360	S355J2	23303242	27F.65.04/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90420	00	CWWS026	891	1	PL15x291	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90420	00	CWWS026	892	1	PL15x134	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90420	00	CWWS026	896	2	PL15x145,2	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90420	00	CWWS026	897	1	PL15x136,8	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90420	00	CWWS026	899	1	HEA340	S355J2	80174		1724000079	00040	5019559		
123A90-FDL-ST-DD-90420	00	CWWS026	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90420	00	CWWS026	939	1	PL15x291	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	888	1	PL15x200,2	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	889	1	PL25x360	S355J2	23303242	27F.65.04/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90421	00	CWWS027	891	1	PL15x291	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	892	1	PL15x134	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	896	2	PL15x145,2	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	897	1	PL15x136,7	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90421	00	CWWS027	899	1	HEA340	S355J2	80174		1724000079	00040	5019559		
123A90-FDL-ST-DD-90421	00	CWWS027	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90421	00	CWWS027	939	1	PL15x291	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90422	01	CWWS028	890	2	PL15x128	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90422	01	CWWS028	893	1	PL15x128	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90422	01	CWWS028	894	2	PL10x100	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90422	01	CWWS028	895	2	PL10x77	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90423	01	CWWS029	890	2	PL15x128	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90423	01	CWWS029	893	1	PL15x128	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90423	01	CWWS029	894	2	PL10x100	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90423	01	CWWS029	895	2	PL10x77	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90424	00	CWWS035	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90424	00	CWWS035	937	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90424	00	CWWS035	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90424	00	CWWS036	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90424	00	CWWS036	937	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90424	00	CWWS036	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90424	00	CWWS037	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90424	00	CWWS037	937	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90424	00	CWWS037	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90424	00	CWWS038	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90424	00	CWWS038	937	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90424	00	CWWS038	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90425	00	CWWS039	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90425	00	CWWS039	938	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90425	00	CWWS039	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90425	00	CWWS040	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90425	00	CWWS040	938	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90425	00	CWWS040	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90426	00	CWWS001	880	1	IPE330	S355J2	225533		1724000079	00560	01-E-86957		
123A90-FDL-ST-DD-90426	00	CWWS001	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS001	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS001	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS002	880	1	IPE330	S355J2	225533		1724000079	00560	01-E-86957		
123A90-FDL-ST-DD-90426	00	CWWS002	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS002	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS002	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90426	00	CWWS020	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90426	00	CWWS021	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90426	00	CWWS022	884	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90426	00	CWWS046	904	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90427	00	CWWS051	907	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90427	00	CWWS052	907	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90427	00	CWWS053	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90427	00	CWWS054	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90427	00	CWWS055	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90427	00	CWWS055	923	2	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90427	00	CWWS055	927	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90428	00	CWWS075	904	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90428	00	CWWS075	923	2	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90428	00	CWWS075	1083	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90428	00	CWWS076	908	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90428	00	CWWS076	927	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90428	00	CWWS076	1083	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90429	00	CWWS043	919	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90429	00	CWWS043	934	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90429	00	CWWS043	1096	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90429	00	CWWS044	919	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90429	00	CWWS044	934	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90429	00	CWWS044	1096	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90430	00	CWWS045	933	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90430	00	CWWS045	934	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90430	00	CWWS045	1096	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90430	00	CWWS047	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90430	00	CWWS047	919	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90430	00	CWWS047	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90431	00	CWWS048	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90431	00	CWWS048	919	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90431	00	CWWS048	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90431	00	CWWS049	905	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90431	00	CWWS049	932	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90431	00	CWWS049	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90432	00	CWWS050	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90432	00	CWWS050	933	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90432	00	CWWS050	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90432	00	CWWS069	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90432	00	CWWS069	933	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90432	00	CWWS069	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90433	00	CWWS070	905	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90433	00	CWWS070	933	2	PL15x430	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90433	00	CWWS070	1095	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90434	00	CWWS030	898	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90434	00	CWWS031	898	1	IPE330	S355J2	139269		1724000079	00180	249		
123A90-FDL-ST-DD-90434	00	CWWS031	923	2	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90434	00	CWWS031	927	1	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90434	00	CWWS032	900	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90435	00	CWWS059	913	1	IPE330	S355J2	139269		1724000079	00220	145		
123A90-FDL-ST-DD-90435	00	CWWS066	916	1	IPE330	S355J2	105716		1723001808	00050	1003407813		
123A90-FDL-ST-DD-90435	00	CWWS066	923	2	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90435	00	CWWS066	927	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90435	00	CWWS066	928	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90435	00	CWWS080	900	1	HEA340	S355J2	80174		1724000079	00020	5019559		
123A90-FDL-ST-DD-90435	00	CWWS080	921	2	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90435	00	CWWS080	1074	1	PL10x91,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90436	00	CWWS077	885	1	PL25x360	S355J2	23303241	27F.106.01	1723001105	00010	12LP23		
123A90-FDL-ST-DD-90436	00	CWWS077	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90436	00	CWWS077	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90436	00	CWWS077	1072	1	HEA340	S355J2	72415		1724000079	00040	2200/9-2023		
123A90-FDL-ST-DD-90436	00	CWWS077	1094	2	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90437	00	CWWS078	885	1	PL25x360	S355J2	23303241	27F.106.02	1723001105	00010	12LP23		
123A90-FDL-ST-DD-90437	00	CWWS078	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90437	00	CWWS078	910	2	PL20x430	S355J2	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90437	00	CWWS078	1072	1	HEA340	S355J2	80174		1724000079	00040	5019559		
123A90-FDL-ST-DD-90437	00	CWWS078	1094	2	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90438	00	CWWS033	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90438	00	CWWS033	911	1	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90438	00	CWWS033	912	1	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90438	00	CWWS033	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90438	00	CWWS034	901	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90438	00	CWWS034	911	1	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90438	00	CWWS034	912	1	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90438	00	CWWS034	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90439	00	CWWS041	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90439	00	CWWS041	929	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90439	00	CWWS041	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90439	00	CWWS042	901	1	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90439	00	CWWS042	930	2	PL20x430	S355J2	760946	216929/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90439	00	CWWS042	1093	1	Ø273,1x11,13	S355J2	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS004	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS005	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS006	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS007	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS008	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS009	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS010	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS011	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS012	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS013	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS014	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS015	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS016	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90440	00	CWWS017	1092	1	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90441	00	CWWS056	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90441	00	CWWS057	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90441	00	CWWS058	909	1	Ø219,1x8,18	API5LX52	57488K		1724000284	00040	80062/24		
123A90-FDL-ST-DD-90441	00	CWWS060	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90441	00	CWWS061	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90441	00	CWWS062	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90441	00	CWWS063	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90441	00	CWWS064	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90441	00	CWWS065	915	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90442	00	CWWS067	925	2	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90442	00	CWWS067	926	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90442	00	CWWS067	936	4	PL8x148,3	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90443	00	CWWS068	917	1	Ø141,3x6,55	API5LX52	WK22C105842		1723001270	00010	22GC013082-1		
123A90-FDL-ST-DD-90443	00	CWWS068	935	1	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90443	00	CWWS068	1091	2	PL8x121,3	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90443	00	CWWS071	917	1	Ø141,3x6,55	API5LX52	WK22C105842		1723001270	00010	22GC013082-1		
123A90-FDL-ST-DD-90443	00	CWWS071	935	1	PL10x337,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90443	00	CWWS071	1091	2	PL8x121,3	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90476	00	CWTP001	1097	3	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1102	1	PL75x600	S420MLO	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90476	00	CWTP001	1103	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90476	00	CWTP001	1104	1	PL75x1719,1	S420MLOZ	958443	245596/1	1724000081	00040	A0379014		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90476	00	CWTP001	1105	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90476	00	CWTP001	1106	2	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90476	00	CWTP001	1107	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90476	00	CWTP001	1108	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90476	00	CWTP001	1109	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90476	00	CWTP001	1110	2	PL20x714,4	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90476	00	CWTP001	1111	2	PL20x414	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1112	1	PL30x2379	S420MLO	869272	247770/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1113	1	PL75x1799	S420MLO	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90476	00	CWTP001	1114	1	PL30x2379	S420MLO	869272	247772/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1115	1	PL25x744	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90476	00	CWTP001	1116	1	PL20x750	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1117	2	PL20x395	S420MLO	861927	170990/1	1723001716	00030	A0376103/A		
123A90-FDL-ST-DD-90476	00	CWTP001	1118	1	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1119	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90476	00	CWTP001	1120	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90476	00	CWTP001	1121	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90476	00	CWTP001	1122	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90476	00	CWTP001	1123	1	PL65x1909,2	S420MLOZ	869177	245599/1	1724000081	00030	A0378984		
123A90-FDL-ST-DD-90476	00	CWTP001	1125	1	PL65x805	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90476	00	CWTP001	1126	1	PL65x1265,1	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90479	00	CWTP002	1097	3	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1102	1	PL75x600	S420MLO	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90479	00	CWTP002	1103	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90479	00	CWTP002	1104	1	PL75x1719,1	S420MLOZ	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90479	00	CWTP002	1105	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90479	00	CWTP002	1106	2	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90479	00	CWTP002	1107	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90479	00	CWTP002	1108	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90479	00	CWTP002	1109	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90479	00	CWTP002	1110	2	PL20x714,4	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90479	00	CWTP002	1111	2	PL20x414	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1112	1	PL30x2379	S420MLO	869272	247776/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1113	1	PL75x1799	S420MLO	958443	245595/1	1724000081	00040	A0378984		
123A90-FDL-ST-DD-90479	00	CWTP002	1114	1	PL30x2379	S420MLO	869272	247774/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1115	1	PL25x744	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90479	00	CWTP002	1116	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1117	2	PL20x395	S420MLO	861927	170990/1	1723001716	00030	A0376103/A		
123A90-FDL-ST-DD-90479	00	CWTP002	1118	1	PL30x190	S420MLO	869272	247774/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1119	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90479	00	CWTP002	1120	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90479	00	CWTP002	1121	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90479	00	CWTP002	1122	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90479	00	CWTP002	1124	1	PL65x1265,1	S420MLO	764715	245601/1	1724000081	00030	A0378609		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90479	00	CWTP002	1125	1	PL65x805,1	S420MLO	869177	245599/1	1724000081	00030	A0378984		
123A90-FDL-ST-DD-90479	00	CWTP002	1127	1	PL65x1719,1	S420MLOZ	869177	245599/1	1724000081	00030	A0378984		
123A90-FDL-ST-DD-90482	00	CWTP003	1097	3	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1102	1	PL75x600	S420MLO	958443	245595/1	1724000081	00040	A0378984		
123A90-FDL-ST-DD-90482	00	CWTP003	1103	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90482	00	CWTP003	1104	1	PL75x1719,1	S420MLOZ	958443	245595/1	1724000081	00040	A0378984		
123A90-FDL-ST-DD-90482	00	CWTP003	1105	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90482	00	CWTP003	1106	2	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90482	00	CWTP003	1107	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90482	00	CWTP003	1108	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90482	00	CWTP003	1109	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90482	00	CWTP003	1110	2	PL20x714,4	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90482	00	CWTP003	1111	2	PL20x414	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1112	1	PL30x2379	S420MLO	869272	247770/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1113	1	PL75x1799	S420MLO	958443	245595/1	1724000081	00040	A0378984		
123A90-FDL-ST-DD-90482	00	CWTP003	1114	1	PL30x2379	S420MLO	869272	247770/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1115	1	PL25x744	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1116	1	PL20x750	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1117	2	PL20x395	S420MLO	861927	170990/1	1723001716	00030	A0376103/A		
123A90-FDL-ST-DD-90482	00	CWTP003	1118	1	PL30x190	S420MLO	869272	247774/2	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1119	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90482	00	CWTP003	1120	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90482	00	CWTP003	1121	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90482	00	CWTP003	1122	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90482	00	CWTP003	1125	1	PL65x805	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90482	00	CWTP003	1127	1	PL65x1719,1	S420MLOZ	764715	245600/1	1724000081	00030	A0379014		
123A90-FDL-ST-DD-90482	00	CWTP003	1136	1	PL65x1265,1	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90485	00	CWTP004	1097	3	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1102	1	PL75x600	S420MLO	958443	245595/1	1724000081	00040	A0378984		
123A90-FDL-ST-DD-90485	00	CWTP004	1103	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90485	00	CWTP004	1104	1	PL75x1719,1	S420MLOZ	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90485	00	CWTP004	1105	1	SPD800x40	S420MLOZ	856504	246555/1	1724000081	00060	A0378545		
123A90-FDL-ST-DD-90485	00	CWTP004	1106	2	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90485	00	CWTP004	1107	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90485	00	CWTP004	1108	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90485	00	CWTP004	1109	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90485	00	CWTP004	1110	2	PL20x714,4	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1111	2	PL20x414	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1112	1	PL30x2379	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1113	1	PL75x1799	S420MLO	958443	245596/1	1724000081	00040	A0379014		
123A90-FDL-ST-DD-90485	00	CWTP004	1114	1	PL30x2379	S420MLO	869272	247772/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1115	1	PL25x744	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90485	00	CWTP004	1116	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1117	2	PL20x395	S420MLO	861927	170990/1	1723001716	00030	A0376103/A		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90485	00	CWTP004	1118	1	PL30x190	S420MLO	869272	247776/1	1724000081	00070	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1119	1	PL20x750	S420MLO	869272	247800/11	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90485	00	CWTP004	1120	1	PL20x1200	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90485	00	CWTP004	1121	1	PL20x1294	S420MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90485	00	CWTP004	1122	1	PL25x500	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90485	00	CWTP004	1123	1	PL65x1909,2	S420MLOZ	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90485	00	CWTP004	1125	1	PL65x805	S420MLO	764715	245600/1	1724000081	00030	A0379014		
123A90-FDL-ST-DD-90485	00	CWTP004	1135	1	PL65x1265,1	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90488	00	CWTP005	1098	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90488	00	CWTP005	1099	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90488	00	CWTP005	1100	2	PL20x944	S420MLO	869272	249150/1	1724000081	00120	A0378546		
123A90-FDL-ST-DD-90489	00	CWTP008	1098	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90489	00	CWTP008	1099	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90489	00	CWTP008	1100	2	PL20x944	S420MLO	869272	247801/2	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90489	00	CWTP008	1134	1	PL20x414	S420MLO	869272	247800/21	1724000081	00100	A0378546		
123A90-FDL-ST-DD-90490	00	CWTP006	1098	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90490	00	CWTP006	1099	1	PL25x500	S420MLO	869272	247890/2	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90490	00	CWTP006	1100	2	PL20x944	S420MLO	869272	249150/1	1724000081	00120	A0378546		
123A90-FDL-ST-DD-90491	00	CWTP007	1098	1	PL25x500	S420MLO	869272	247890/1	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90491	00	CWTP007	1099	1	PL25x500	S420MLO	869272	247890/2	1724000081	00090	A0378546		
123A90-FDL-ST-DD-90491	00	CWTP007	1100	2	PL20x944	S420MLO	869272	249150/1	1724000081	00120	A0378546		
123A90-FDL-ST-DD-90492	00	CWUSB187	1148	1	HEA340	S355J2	139894A		1723001808	00020	3296		
123A90-FDL-ST-DD-90493	01	CWUTB100	433	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90493	01	CWUTB101	433	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90493	01	CWUTB179	1150	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90493	01	CWUTB180	1150	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90493	01	CWUTB181	1150	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90493	01	CWUTB182	1150	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90494	00	CWBR029	1165	1	Ø406,4x20,62	API5LX52	899081		1724000419	00020	26/2024/TUV		
123A90-FDL-ST-DD-90494	00	CWBR031	1168	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90494	00	CWBR032	1152	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90494	00	CWLG019	1163	1	SPD700x30	S420MLOZ	863028	181861-1	1724000112	00060	A0376299/A		
123A90-FDL-ST-DD-90494	00	CWLG019	1169	1	SPD700x30	S420MLOZ	863028	181861-1	1724000112	00060	A0376299/A		
123A90-FDL-ST-DD-90495	00	CWTP009	1137	2	PL30x4148,3	S420MLO	869272	249352/1	1724000081	00080	A0378613		
123A90-FDL-ST-DD-90495	00	CWTP009	1138	4	PL50x2073,1	S420MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90495	00	CWTP009	1139	2	Ø3850x50	S420MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90495	00	CWTP009	1140	1	Ø7000x325	S420MLOZ	466767		1724000344	00010	1724000344		
123A90-FDL-ST-DD-90495	00	CWTP009	1141	2	Ø7000x65	S420MLOZ	764718	245939/1	1724000081	00020	A0378609		
123A90-FDL-ST-DD-90495	00	CWTP009	1142	1	Ø7000x65	S420MLOZ	764718	245943/1	1724000081	00010	A0378545		
123A90-FDL-ST-DD-90495	00	CWTP009	1142	1	Ø7000x65	S420MLOZ	764718	245941/1	1724000081	00010	A0378545		
123A90-FDL-ST-DD-90495	00	CWTP009	1143	2	PL65x3853,7	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90495	00	CWTP009	1144	2	PL65x3853,7	S420MLO	764715	245601/1	1724000081	00030	A0378609		
123A90-FDL-ST-DD-90495	00	CWTP009	1145	1	Ø7000x65	S420MLO	764718	245945/1	1724000081	00010	A0379014		
123A90-FDL-ST-DD-90495	00	CWTP009	1146	1	Ø7000x65	S420MLOZ	764349	250043/1	1724000081	00020	A0378545		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90495	00	CWTP009	1147	2	PD1940x1200x30	S420MLO	869272	249352/1	1724000081	00080	A0378613		
123A90-FDL-ST-DD-90552	00	CWUTB183	1424	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90552	00	CWUTB184	1423	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90553	00	CWTPW001	1319	1	IPE330	S355J2	139269		1724000079	00240	145		
123A90-FDL-ST-DD-90553	00	CWTPW002	1319	1	IPE330	S355J2	139269		1724000079	00240	145		
123A90-FDL-ST-DD-90553	00	CWTPW051	1353	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90553	00	CWTPW052	1353	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90553	00	CWTPW053	1353	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90553	00	CWTPW054	1353	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90553	00	CWTPW054	1383	2	PL8x61	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90554	00	CWTPW007	1323	1	IPE330	S355J2	139269		1724000079	00250	145		
123A90-FDL-ST-DD-90554	00	CWTPW007	1382	4	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90554	00	CWTPW007	1419	4	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90554	00	CWTPW012	1327	1	IPE330	S355J2	139269		1724000079	00280	145		
123A90-FDL-ST-DD-90554	00	CWTPW012	1382	4	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90554	00	CWTPW012	1420	4	PL10x66,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90555	00	CWTPW034	1339	1	HEA340	S355J2	80174		1724000079	00450	5019635		
123A90-FDL-ST-DD-90555	00	CWTPW034	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90555	00	CWTPW034	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90555	00	CWTPW034	1391	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90556	00	CWTPW037	1341	1	HEA340	S355J2	80174		1724000079	00100	5019559		
123A90-FDL-ST-DD-90556	00	CWTPW037	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90556	00	CWTPW037	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90556	00	CWTPW037	1391	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90556	00	CWTPW085	1376	2	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90556	00	CWTPW085	1399	1	HEA340	S355J2	63746		1724000079	00170	398/11-2022		
123A90-FDL-ST-DD-90556	00	CWTPW086	1376	2	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90556	00	CWTPW086	1401	1	HEA340	S355J2	80174		1724000079	00140	5019559		
123A90-FDL-ST-DD-90557	00	CWTPW038	1342	1	HEA340	S355J2	72415		1724000079	00110	2200/9-2023		
123A90-FDL-ST-DD-90557	00	CWTPW038	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90557	00	CWTPW038	1376	2	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90557	00	CWTPW038	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90557	00	CWTPW038	1391	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90558	00	CWTPW003	1320	1	HEA340	S355J2	80174		1724000079	00050	5019559		
123A90-FDL-ST-DD-90558	00	CWTPW003	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90558	00	CWTPW003	1376	1	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90558	00	CWTPW003	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90558	00	CWTPW003	1391	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90558	00	CWTPW004	1321	1	HEA340	S355J2	80174		1724000079	00060	5019559		
123A90-FDL-ST-DD-90558	00	CWTPW008	1324	1	IPE330	S355J2	139269		1724000079	00260	145		
123A90-FDL-ST-DD-90558	00	CWTPW008	1382	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90559	00	CWTPW009	1325	1	IPE330	S355J2	139269		1724000079	00270	145		
123A90-FDL-ST-DD-90559	00	CWTPW013	1328	1	IPE330	S355J2	225533		1724000079	00650	01-E-86957		
123A90-FDL-ST-DD-90559	00	CWTPW039	1343	1	IPE330	S355J2	139269		1724000079	00290	145		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90559	00	CWTPW048	1350	1	IPE330	S355J2	56645		1724000079	00670	935192		
123A90-FDL-ST-DD-90559	00	CWTPW048	1380	3	PL8x66,2	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90559	00	CWTPW048	1409	1	PL8x66,2	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90559	00	CWTPW048	1422	1	PL8x66,2	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90560	00	CWTPW070	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90560	00	CWTPW070	1361	1	HEA340	S355J2	80174		1724000079	00120	5019559		
123A90-FDL-ST-DD-90560	00	CWTPW070	1363	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90560	00	CWTPW070	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90560	00	CWTPW071	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90560	00	CWTPW071	1363	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90560	00	CWTPW071	1369	1	HEA340	S355J2	80174		1724000079	00150	5019559		
123A90-FDL-ST-DD-90560	00	CWTPW071	1376	2	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90560	00	CWTPW071	1384	2	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90561	00	CWTPW072	1360	1	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90561	00	CWTPW072	1375	1	PL10x310	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90561	00	CWTPW072	1387	1	HEA340	S355J2	139893A		1724000079	00070	3356		
123A90-FDL-ST-DD-90561	00	CWTPW073	1362	1	HEA340	S355J2	61849		1724000079	00130	4828653		
123A90-FDL-ST-DD-90561	00	CWTPW074	1364	1	HEA340	S355J2	80174		1724000079	00140	5022180		
123A90-FDL-ST-DD-90561	00	CWTPW075	1365	1	IPE330	S355J2	139269		1724000079	00320	145		
123A90-FDL-ST-DD-90561	00	CWTPW075	1371	8	PL10x171,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90561	00	CWTPW075	1382	1	PL10x66,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90561	00	CWTPW075	1398	1	PL15x370	S355J2	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90562	00	CWTPW005	1322	1	HEA340	S355J2	61849		1724000079	00130	4828653		
123A90-FDL-ST-DD-90562	00	CWTPW006	1322	1	HEA340	S355J2	80174		1724000079	00490	5019635		
123A90-FDL-ST-DD-90562	00	CWTPW006	1376	2	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90562	00	CWTPW010	1326	1	HEA340	S355J2	80174		1724000079	00440	5019635		
123A90-FDL-ST-DD-90562	00	CWTPW011	1326	1	HEA340	S355J2	80174		1724000079	00440	5019635		
123A90-FDL-ST-DD-90562	00	CWTPW044	1346	1	IPE330	S355J2	139269		1724000079	00300	145		
123A90-FDL-ST-DD-90563	00	CWTPW083	1376	3	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90563	00	CWTPW083	1406	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90563	00	CWTPW084	1376	3	PL10x135,3	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90563	00	CWTPW084	1406	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90564	00	CWTPW087	1377	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90564	00	CWTPW088	1377	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90564	00	CWTPW089	1378	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90564	00	CWTPW090	1378	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90564	00	CWTPW097	1404	1	IPE330	S355J2	139269		1724000079	00290	145		
123A90-FDL-ST-DD-90564	00	CWTPW098	1405	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90564	00	CWTPW099	1405	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90565	00	CWTPW059	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90565	00	CWTPW059	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90565	00	CWTPW059	1374	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90565	00	CWTPW060	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90565	00	CWTPW060	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		

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SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
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Job	**123A90 - Deck**		
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DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90565	00	CWTPW060	1374	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90566	00	CWTPW078	1367	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90566	00	CWTPW078	1372	2	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90566	00	CWTPW078	1373	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90566	00	CWTPW079	1367	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90566	00	CWTPW079	1372	2	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90566	00	CWTPW079	1373	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90567	00	CWTPW067	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90567	00	CWTPW067	1359	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90567	00	CWTPW067	1391	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90567	00	CWTPW080	1367	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90567	00	CWTPW080	1373	3	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90567	00	CWTPW080	1407	2	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90568	00	CWTPW062	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90568	00	CWTPW062	1356	1	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90568	00	CWTPW062	1360	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90568	00	CWTPW063	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90568	00	CWTPW063	1356	1	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90568	00	CWTPW063	1360	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90569	00	CWTPW065	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90569	00	CWTPW065	1357	1	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90569	00	CWTPW065	1358	1	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90569	00	CWTPW065	1359	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90569	00	CWTPW066	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90569	00	CWTPW066	1359	3	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90569	00	CWTPW066	1402	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90570	00	CWTPW068	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90570	00	CWTPW068	1359	1	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90570	00	CWTPW068	1360	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90570	00	CWTPW069	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90570	00	CWTPW069	1403	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90571	00	CWTPW076	1366	1	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90571	00	CWTPW076	1367	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90571	00	CWTPW076	1368	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90571	00	CWTPW076	1397	1	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90571	00	CWTPW077	1366	1	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90571	00	CWTPW077	1367	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90571	00	CWTPW077	1373	2	PL10x68,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90571	00	CWTPW077	1397	1	PL20x430	S355J2	861927	170992/2	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90572	00	CWTPW055	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90572	00	CWTPW055	1355	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90572	00	CWTPW055	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90572	00	CWTPW056	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90572	00	CWTPW056	1355	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90572	00	CWTPW056	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90573	00	CWTPW057	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90573	00	CWTPW057	1355	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90573	00	CWTPW057	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90573	00	CWTPW058	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90573	00	CWTPW058	1355	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90573	00	CWTPW058	1356	2	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90574	00	CWTPW061	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90574	00	CWTPW061	1356	1	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90574	00	CWTPW061	1360	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90574	00	CWTPW064	1354	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90574	00	CWTPW064	1356	1	PL10x65,4	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90574	00	CWTPW064	1360	2	PL20x370	S355J2	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90575	00	CWTPW014	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW015	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW016	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW017	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW018	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW019	1329	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW020	1330	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90575	00	CWTPW021	1331	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90575	00	CWTPW022	1332	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW023	1333	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW023	1418	1	PL15x297	S355J2	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90575	00	CWTPW024	1333	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW024	1418	1	PL15x297	S355J2	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90575	00	CWTPW025	1334	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW026	1334	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW027	1334	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90575	00	CWTPW028	1334	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90576	00	CWTPW029	1335	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90576	00	CWTPW030	1336	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90576	00	CWTPW031	1337	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90576	00	CWTPW032	1338	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90576	00	CWTPW033	1338	1	Ø219,1x10,31	API5LX52	2300010		1724000284	00020	B27849/2		
123A90-FDL-ST-DD-90576	00	CWTPW035	1340	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90576	00	CWTPW036	1340	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90576	00	CWTPW040	1344	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW041	1345	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW042	1345	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW043	1345	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW045	1347	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW046	1348	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW047	1349	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90577	00	CWTPW081	1370	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90577	00	CWTPW095	1392	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	73555/23		
123A90-FDL-ST-DD-90577	00	CWTPW096	1400	1	Ø168,3x7,11	API5LX52	1223477		1724000284	00030	B27170/1		
123A90-FDL-ST-DD-90580	00	CWTPW091	1379	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90580	00	CWTPW092	1388	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90580	00	CWTPW093	1389	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90580	00	CWTPW094	1390	1	IPE330	S355J2	139269		1724000079	00330	145		
123A90-FDL-ST-DD-90581	00	CWUSB188	1430	1	HEA340	S355J2	129460A		1723001808	00020	2284		
123A90-FDL-ST-DD-90581	00	CWUSB189	1430	1	HEA340	S355J2	129460A		1723001808	00020	2284		
123A90-FDL-ST-DD-90581	00	CWUSB190	1430	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90581	00	CWUSB191	1430	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90582	01	CWUTB185	1425	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90582	01	CWUTB186	1426	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90582	01	CWUTB187	1427	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90582	01	CWUTB187	1431	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90582	01	CWUTB188	1427	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90582	01	CWUTB189	1428	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90582	01	CWUTB189	1431	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90596	00	CWUG001	1435	1	Ø355,6x15,09	API5LX52	SB52898	PB720291-04	1722000931	00030	220620-FP01PI-0359A1-0001		
123A90-FDL-ST-DD-90596	00	CWUG001	1437	4	PL8x320,6	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90596	00	CWUG002	1435	1	Ø355,6x15,09	API5LX52	SB52898	PB720291-04	1722000931	00030	220620-FP01PI-0359A1-0001		
123A90-FDL-ST-DD-90596	00	CWUG002	1437	4	PL8x320,6	S355MLO	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90597	01	CWUG003	1436	2	PL15x550	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90597	01	CWUG003	1438	7	PL15x127,5	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90597	01	CWUG003	1441	4	PL20x127,5	S355MLO	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90597	01	CWUG003	1445	3	PL15x487,5	S355MLO	760425	214401/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90597	01	CWUG003	1446	3	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90597	01	CWUG003	1447	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90597	01	CWUG003	1448	1	PL25x920	S355MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90597	01	CWUG003	2118	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	1436	2	PL15x550	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	1438	7	PL15x127,5	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	1441	4	PL20x127,5	S355MLO	760946	216927/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	1445	3	PL15x487,5	S355MLO	760425	214401/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	1446	3	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90598	01	CWUG004	1447	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90598	01	CWUG004	1448	1	PL25x920	S355MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90598	01	CWUG004	2118	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	1438	7	PL15x127,5	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	1439	2	PL40x550	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90599	01	CWUG005	1440	2	PL40x400	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90599	01	CWUG005	1442	2	PL20x380	S355MLO	760946	216927/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	1445	3	PL15x487,5	S355MLO	760425	214401/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	1446	3	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		

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SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
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RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90599	01	CWUG005	1448	1	PL25x920	S355MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	1449	4	PL40x300	S355MLO	955033	216696/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90599	01	CWUG005	1452	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90599	01	CWUG005	2118	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	2126	6	PL15x120	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	2185	1	PL15x650	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90599	01	CWUG005	2186	1	PL15x650	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	1438	7	PL15x127,5	S355MLO	760425	214400/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	1439	2	PL40x550	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90600	01	CWUG006	1440	2	PL40x400	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90600	01	CWUG006	1442	2	PL20x380	S355MLO	760946	216927/2	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	1445	3	PL15x487,5	S355MLO	760425	214401/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	1446	3	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90600	01	CWUG006	1448	1	PL25x920	S355MLO	954770	213954/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	1449	4	PL40x300	S355MLO	955033	216696/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90600	01	CWUG006	1452	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90600	01	CWUG006	2118	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	2126	6	PL15x120	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	2185	1	PL15x650	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90600	01	CWUG006	2186	1	PL15x650	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG007	1438	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG007	1450	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90601	00	CWUG007	1451	1	PL25x920	S355MLO	954770	213955/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG008	1438	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG008	1450	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90601	00	CWUG008	1451	1	PL25x920	S355MLO	954770	213955/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG009	1438	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG009	1450	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90601	00	CWUG009	1451	1	PL25x920	S355MLO	954770	213955/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG010	1438	2	PL15x127,5	S355MLO	760425	214400/2	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90601	00	CWUG010	1450	2	PL40x300	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90601	00	CWUG010	1451	1	PL25x920	S355MLO	954770	213955/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90602	00	CWUG011	1443	2	PL40x694	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90602	00	CWUG011	1444	2	PL20x914	S355MLO	760946	216929/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90602	00	CWUG012	1443	2	PL40x694	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90602	00	CWUG012	1444	2	PL20x914	S355MLO	760946	216929/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90602	00	CWUG013	1443	2	PL40x694	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90602	00	CWUG013	1444	2	PL20x914	S355MLO	760946	216929/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90602	00	CWUG014	1443	2	PL40x694	S355MLO	955033	216692/1	1723001495	00010	A0377515		
123A90-FDL-ST-DD-90602	00	CWUG014	1444	2	PL20x914	S355MLO	760946	216929/1	1723001495	00030	A0377578		
123A90-FDL-ST-DD-90627	00	CWLTB262	1595	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90627	00	CWLTB263	1596	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90627	00	CWLTB264	1597	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90627	00	CWLTB265	1597	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
	Discipline	**STRUCTURE**			
ROSETTI MARINO	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90627	00	CWLTB266	1597	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90627	00	CWLTB267	1598	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90627	00	CWLTB268	1599	1	PL10x132,5	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90628	00	CWPAUB001	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB001	1612	1	HEB600	S355J2	66825		1724000593	00010	5000157473		
123A90-FDL-ST-DD-90628	00	CWPAUB002	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB002	1612	1	HEB600	S355J2	66825		1724000593	00010	5000157473		
123A90-FDL-ST-DD-90628	00	CWPAUB003	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB003	1612	1	HEB600	S355J2	66825		1724000593	00010	5000157473		
123A90-FDL-ST-DD-90628	00	CWPAUB004	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB004	1612	1	HEB600	S355J2	81387		1724000593	00010	5000160840		
123A90-FDL-ST-DD-90628	00	CWPAUB005	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB005	1621	1	HEB600	S355J2	81387		1724000593	00010	5000160840		
123A90-FDL-ST-DD-90628	00	CWPAUB006	1609	1	PL15x132,2	S355J2	760425	214401/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90628	00	CWPAUB006	1621	1	HEB600	S355J2	81387		1724000593	00010	5000160840		
123A90-FDL-ST-DD-90629	00	CWPAUN001	1602	2	PL30x660	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90629	00	CWPAUN001	1603	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90629	00	CWPAUN001	1608	2	PL15x101,4	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90629	00	CWPAUN002	1602	2	PL30x660	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90629	00	CWPAUN002	1603	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90629	00	CWPAUN002	1608	2	PL15x101,4	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90630	00	CWPAUN003	1602	2	PL30x660	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90630	00	CWPAUN003	1603	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90630	00	CWPAUN003	1608	2	PL15x101,4	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90630	00	CWPAUN004	1602	2	PL30x660	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90630	00	CWPAUN004	1603	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90630	00	CWPAUN004	1608	2	PL15x101,4	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90631	00	CWPAUN005	1604	2	PL30x610	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90631	00	CWPAUN005	1605	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90631	00	CWPAUN005	1608	1	PL15x101,8	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90631	00	CWPAUN006	1604	2	PL30x610	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90631	00	CWPAUN006	1605	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90631	00	CWPAUN006	1608	1	PL15x101,8	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90631	00	CWPAUN007	1604	2	PL30x610	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90631	00	CWPAUN007	1605	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90631	00	CWPAUN007	1608	1	PL15x101,8	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90631	00	CWPAUN008	1604	2	PL30x610	S355J2	867619	251507/1	1724000173	00040	A0378721		
123A90-FDL-ST-DD-90631	00	CWPAUN008	1605	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90631	00	CWPAUN008	1608	1	PL15x101,8	S355J2	760333	212992/11	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90632	00	CWPAUP022	1613	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP023	1613	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP024	1613	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP025	1613	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP026	1614	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90632	00	CWPAUP027	1614	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP028	1614	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90632	00	CWPAUP029	1614	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP032	1618	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP033	1618	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP034	1618	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP035	1618	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP036	1619	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP037	1619	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP038	1619	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP039	1619	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP040	1620	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP041	1620	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP042	1620	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90633	00	CWPAUP043	1620	1	Ø219,1x12,7	API5LX52	1240760		1724000568	00070	24C2993		
123A90-FDL-ST-DD-90634	00	CWPAUP013	1607	1	Ø355,6x15,88	API5LX52	899086		1723002208	00050	48/2024/TUV		
123A90-FDL-ST-DD-90634	00	CWPAUP014	1607	1	Ø355,6x15,88	API5LX52	899086		1723002208	00050	48/2024/TUV		
123A90-FDL-ST-DD-90634	00	CWPAUP030	1617	1	Ø273,1x15,88	API5LX52	42894K		1724000568	00050	B24184/1		
123A90-FDL-ST-DD-90634	00	CWPAUP031	1617	1	Ø273,1x15,88	API5LX52	42894K		1724000568	00050	B24184/1		
123A90-FDL-ST-DD-90635	00	CWPAUP015	1610	1	Ø273,1x15,88	API5LX52	42894K		1724000568	00050	B24184/1		
123A90-FDL-ST-DD-90635	00	CWPAUP015	1615	2	PL15x477,3	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90635	00	CWPAUP015	1622	4	PL8x238,1	S355J2	730325314	2945030	1724000297	00020	730/0314487		
123A90-FDL-ST-DD-90635	00	CWPAUP016	1610	1	Ø273,1x15,88	API5LX52	42894K		1724000568	00050	B24184/1		
123A90-FDL-ST-DD-90635	00	CWPAUP016	1615	2	PL15x477,3	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90635	00	CWPAUP016	1622	4	PL8x238,1	S355J2	730325314	2945030	1724000297	00020	730/0314487		
123A90-FDL-ST-DD-90635	00	CWPAUP017	1610	1	Ø273,1x15,88	API5LX52	42894K		1724000568	00050	B24184/1		
123A90-FDL-ST-DD-90635	00	CWPAUP017	1615	2	PL15x477,3	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90635	00	CWPAUP017	1622	4	PL8x238,1	S355J2	730325314	2945030	1724000297	00020	730/0314487		
123A90-FDL-ST-DD-90636	00	CWPAUP009	1606	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90636	00	CWPAUP009	1616	1	PL15x575	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90636	00	CWPAUP009	1623	2	PL8x288,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90636	00	CWPAUP010	1606	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90636	00	CWPAUP010	1616	1	PL15x575	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90636	00	CWPAUP010	1623	2	PL8x288,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90636	00	CWPAUP011	1606	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90636	00	CWPAUP011	1616	1	PL15x575	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90636	00	CWPAUP011	1623	2	PL8x288,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90636	00	CWPAUP012	1606	1	Ø323,9x12,7	API5LX52	72584		1723001797	00030	B28450/3		
123A90-FDL-ST-DD-90636	00	CWPAUP012	1616	1	PL15x575	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90636	00	CWPAUP012	1623	2	PL8x288,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90636	00	CWPAUP018	1611	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	83371/23		
123A90-FDL-ST-DD-90636	00	CWPAUP019	1611	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	83371/23		
123A90-FDL-ST-DD-90636	00	CWPAUP020	1611	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	83371/23		
123A90-FDL-ST-DD-90636	00	CWPAUP021	1611	1	Ø273,1x12,7	API5LX52	56110K/1		1724000568	00060	83371/23		

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	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90637	00	CWPAUP001	1600	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90637	00	CWPAUP002	1600	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90637	00	CWPAUP003	1600	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90637	00	CWPAUP004	1600	1	Ø406,4x15,88	API5LX52	F05512		1724000568	00020	B25733/1		
123A90-FDL-ST-DD-90637	00	CWPAUP005	1601	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90637	00	CWPAUP006	1601	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90637	00	CWPAUP007	1601	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90637	00	CWPAUP008	1601	1	Ø457,2x19,05	API5LX52	898867		1724000568	00010	346/2024/AH		
123A90-FDL-ST-DD-90638	01	CWLG020	1164	1	SPD700x30	S420MLOZ	863028	181861-1	1724000112	00060	A0376299/A		
123A90-FDL-ST-DD-90639	00	CWUTB191	1624	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90639	00	CWUTB192	1624	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90640	00	CWUTE001	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE001	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE001	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90640	00	CWUTE002	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE002	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE002	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90640	00	CWUTE003	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE003	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE003	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90640	00	CWUTE004	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE004	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE004	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90640	00	CWUTE005	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE005	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE005	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90640	00	CWUTE006	1635	1	PL25x400	S355J2	23405120	27F.52.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90640	00	CWUTE006	1636	1	PL15x250	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90640	00	CWUTE006	1640	12	PL15x190	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90641	00	CWUTE007	1637	1	PL15x232,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE008	1637	1	PL15x232,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE009	1637	1	PL15x232,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE010	1637	1	PL15x232,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE011	1637	1	PL15x232,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE012	1637	1	PL15x232,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE013	1637	1	PL15x232,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE014	1637	1	PL15x232,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE015	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE016	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE017	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE018	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE019	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE020	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE021	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90641	00	CWUTE022	1638	1	PL15x182,5	S355J2	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE023	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE024	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE025	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE026	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE027	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE028	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE029	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90641	00	CWUTE030	1638	1	PL15x182,5	S355J2	760333	212992/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90647	02	CWLHAT001	1672	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90647	02	CWLHAT002	1672	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90647	02	CWLHAT003	1673	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90647	02	CWLHAT004	1673	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90647	02	CWLHAT005	1674	1	Ø406,4X9,52	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90647	02	CWLHAT006	1674	1	Ø406,4X9,52	API5LX52	816252		1723001797	00050	B28437/6		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1645	1	PL25x1517,8	S355J2	23405142	27F.51.02/A	1723001105	00060	13LP23		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1646	1	PL25x1517,8	S355J2	442256	24EP012617	1724000962	00010	68ML170624		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1647	4	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1648	4	PL15x150	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1649	4	PL15x185	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1650	4	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1651	20	PL10x247	S355J2	410070	H003075	1724000297	00050	1003477383		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1654	6	PL15x293,4	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1655	4	PL15x187,4	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1656	6	PL15x397,5	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1657	4	PL15x309,3	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1658	2	PL15x150	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1659	2	PL15x150	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1660	4	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1661	4	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1662	2	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1663	1	PL15x150	S355J2	230266	237961-01	1723002082	00030	E2200088		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1664	2	PL15x150	S355J2	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1665	2	PL15x150	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1666	1	PL25x2220	S355J2	868836	257249/1	1724000173	00050	A0379065		
123A90-FDL-ST-DD-90652	01	CWTPWT001	1667	2	PL15x150	S355J2	SB94829	PB905357-03	1724000805	00020	240111-FP01PS-0030A1-0005		
123A90-FDL-ST-DD-90657	00	CWPAUE001	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE002	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE003	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE004	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE005	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE006	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE007	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE008	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**				Prepared by								
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**				Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.								
	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**				Document Status:	**Final Version**					Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**												

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90657	00	CWPAUE009	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE010	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE011	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE012	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE013	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE014	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE015	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE016	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE017	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE018	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE019	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE020	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE021	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE022	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE023	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE024	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE025	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE026	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE027	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE028	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE029	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE030	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE031	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE032	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE033	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE034	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE035	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE036	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE037	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE038	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE039	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE040	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE041	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE042	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE043	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE044	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE045	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE046	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE047	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE048	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE049	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE050	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE051	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE052	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		

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	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**				Document Status:	**Final Version**					Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**												

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123A90-FDL-ST-DD-90657	00	CWPAUE053	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE054	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE055	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE056	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE057	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE058	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE059	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE060	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE061	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE062	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE063	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE064	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE065	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE066	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE067	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE068	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE069	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE070	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE071	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90657	00	CWPAUE072	1677	1	PL15x132,2	S355J2	760420	211440/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90658	00	CWPAUE073	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90658	00	CWPAUE073	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE073	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE075	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90658	00	CWPAUE075	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE075	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE077	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90658	00	CWPAUE077	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE077	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE079	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90658	00	CWPAUE079	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90658	00	CWPAUE079	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE074	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90659	00	CWPAUE074	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE074	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE076	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90659	00	CWPAUE076	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE076	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE078	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90659	00	CWPAUE078	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE078	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE080	1632	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90659	00	CWPAUE080	1633	1	PL15x250	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		
123A90-FDL-ST-DD-90659	00	CWPAUE080	1634	6	PL15x192,5	S355J2	SB94829	PB909164-01	1724000805	00020	240112-FP01PS-0028A1-0021		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90660	00	CWPAUE081	1634	12	PL15x192,5	S355J2	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90660	00	CWPAUE081	1635	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90660	00	CWPAUE081	1636	1	PL15x250	S355J2	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90660	00	CWPAUE082	1634	12	PL15x192,5	S355J2	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90660	00	CWPAUE082	1635	1	PL25x400	S355J2	23405134	27F.67.03/B	1723001105	00050	12LP23		
123A90-FDL-ST-DD-90660	00	CWPAUE082	1636	1	PL15x250	S355J2	760420	211441/2	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90664	01	CWTPLP001	1678	1	PL40x347	S420MLO	26951	576228/1	1724001211	00020	1423218		
123A90-FDL-ST-DD-90664	01	CWTPLP001	1679	2	PL15x220	S420MLO	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90664	01	CWTPLP001	1680	2	PL25x270	S420MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90664	01	CWTPLP002	1678	1	PL40x347	S420MLO	26951	576228/1	1724001211	00020	1423218		
123A90-FDL-ST-DD-90664	01	CWTPLP002	1679	2	PL15x220	S420MLO	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90664	01	CWTPLP002	1680	2	PL25x270	S420MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90664	01	CWTPLP003	1678	1	PL40x347	S420MLO	26951	576228/1	1724001211	00020	1423218		
123A90-FDL-ST-DD-90664	01	CWTPLP003	1679	2	PL15x220	S420MLO	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90664	01	CWTPLP003	1680	2	PL25x270	S420MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90664	01	CWTPLP004	1678	1	PL40x347	S420MLO	26951	576228/1	1724001211	00020	1423218		
123A90-FDL-ST-DD-90664	01	CWTPLP004	1679	2	PL15x220	S420MLO	764349	252314/1	1724000850	00020	A0378911/C		
123A90-FDL-ST-DD-90664	01	CWTPLP004	1680	2	PL25x270	S420MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90664	01	CWTPLP005	1681	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP006	1681	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP007	1681	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP008	1681	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP009	1682	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP010	1682	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP011	1682	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90664	01	CWTPLP012	1682	1	PL25x187	S420MLO	764342	246601/21	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90667	00	CWLHAT011	1686	1	PL15x350	S420MLO	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90667	00	CWLHAT012	1686	1	PL15x350	S420MLO	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90667	00	CWLHAT013	1687	1	PL15x290	S420MLO	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90667	00	CWLHAT014	1687	1	PL15x290	S420MLO	760333	212990/21	1723001495	00040	A0377515		
123A90-FDL-ST-DD-90668	00	CWUHV001	1712	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV002	1711	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV003	1711	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV004	1711	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV011	1697	1	PL10x232,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV012	1697	1	PL10x232,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV013	1698	1	PL10x232,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV014	1698	1	PL10x232,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV017	1702	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV018	1702	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV019	1702	1	PL10x230	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV024	1707	1	PL10x182,5	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90668	00	CWUHV025	1708	1	PL10x86,4	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90669	00	CWUHV005	1690	1	HEA340	S355J2	139893A		1723001808	00020	3296		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90669	00	CWUHV005	1709	3	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90669	00	CWUHV006	1691	1	HEA340	S355J2	80174		1724000079	00420	5019635		
123A90-FDL-ST-DD-90669	00	CWUHV006	1709	2	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90670	00	CWUHV007	1692	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90670	00	CWUHV008	1693	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90670	00	CWUHV008	1710	1	PL10x46,9	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90671	00	CWUHV009	1694	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV009	1695	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV009	1696	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90671	00	CWUHV010	1694	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV010	1695	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV010	1696	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90671	00	CWUHV015	1699	1	PL15x196	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV015	1700	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV015	1701	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90671	00	CWUHV016	1699	1	PL15x196	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV016	1700	1	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90671	00	CWUHV016	1701	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90672	00	CWUHV020	1703	2	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90672	00	CWUHV020	1704	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90672	00	CWUHV021	1703	2	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90672	00	CWUHV021	1704	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90672	00	CWUHV022	1705	2	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90672	00	CWUHV022	1706	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90672	00	CWUHV023	1705	2	PL15x250	S355MLO	760420	211440/1	1723001495	00040	A0377578		
123A90-FDL-ST-DD-90672	00	CWUHV023	1706	1	PL10x300	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90678	00	CWLEN001	1740	4	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90678	00	CWLEN001	1741	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90678	00	CWLEN002	1740	4	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90678	00	CWLEN002	1741	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90678	00	CWLEN003	1742	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90678	00	CWLEN004	1742	1	IPE240	S355J2	141187		1723001808	00040	9172		
123A90-FDL-ST-DD-90678	00	CWLEN005	1742	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90678	00	CWLEN006	1742	1	IPE240	S355J2	75287		1723001808	00040	848/1-2024		
123A90-FDL-ST-DD-90678	00	CWLEN009	1743	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90678	00	CWLEN010	1743	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90679	00	CWLEN007	1744	1	PL8x66,2	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90679	00	CWLEN008	1744	1	PL8x66,2	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90679	00	CWLEN011	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90679	00	CWLEN012	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90679	00	CWLEN013	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90679	00	CWLEN013	1731	2	PL10x297,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90679	00	CWLEN013	1732	2	PL10x267,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90679	00	CWLEN014	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90679	00	CWLEN015	1733	1	PL8x66,2	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90679	00	CWLEN016	1733	1	PL8x66,2	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90680	00	CWUEIA001	1734	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90680	00	CWUEIA004	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90680	00	CWUEIA005	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90680	00	CWUEIA006	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90680	00	CWUEIA007	1723	1	PL50x600	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90680	00	CWUEIA007	1726	2	PL10x317,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90680	00	CWUEIA007	1727	2	PL10x247,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90681	00	CWUEIA002	1714	1	HEA340	S355J2	68674		1723001808	00020	2209/4-2023		
123A90-FDL-ST-DD-90681	00	CWUEIA002	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90681	00	CWUEIA002	1724	2	PL10x245,2	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90681	00	CWUEIA002	1725	2	PL10x313,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90681	00	CWUEIA002	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90682	00	CWUEIA003	1714	1	HEA340	S355J2	68674		1723001808	00020	2209/4-2023		
123A90-FDL-ST-DD-90682	00	CWUEIA003	1724	2	PL10x245,2	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90682	00	CWUEIA003	1725	2	PL10x313,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE001	1738	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90683	00	CWUETE002	1730	1	PL10x135,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE003	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE004	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE005	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE006	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE007	1735	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE014	1739	1	PL10x134	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE015	1739	1	PL10x134	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE016	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE017	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE018	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE019	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE020	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE021	1715	1	PL10x73,5	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE022	1716	1	PL12x134	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90683	00	CWUETE024	1719	1	PL10x134	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90683	00	CWUETE025	1719	1	PL10x134	S355J2	730324439		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90684	00	CWUETE008	1737	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90684	00	CWUETE009	1718	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90684	00	CWUETE009	1740	2	PL8x46,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90684	00	CWUETE010	1718	1	IPE240	S355J2	CE249087		1723001808	00040	202292314		
123A90-FDL-ST-DD-90684	00	CWUETE010	1740	2	PL8x46,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90684	00	CWUETE011	1720	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90684	00	CWUETE011	1740	2	PL8x46,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		
123A90-FDL-ST-DD-90684	00	CWUETE012	1720	1	IPE240	S355J2	141187A		1723001808	00040	10369		
123A90-FDL-ST-DD-90684	00	CWUETE012	1740	2	PL8x46,9	S355J2	730316226	1957054	1723002024	00030	730/0294306		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**					Prepared by							
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**					Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.							
	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**					Document Status:	**Final Version**				Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**												

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90684	00	CWUETE013	1736	1	HEA340	S355J2	62824		1723001808	00020	859/10-2022		
123A90-FDL-ST-DD-90684	00	CWUETE023	1717	1	HEA340	S355J2	76634		1723001808	00020	829/2-2024		
123A90-FDL-ST-DD-90684	00	CWUETE023	1735	4	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90684	00	CWUETE038	1728	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90684	00	CWUETE039	1729	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90685	00	CWUETE026	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE027	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE028	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE029	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE030	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE031	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE032	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE033	1721	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE034	1722	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE035	1722	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE036	1722	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90685	00	CWUETE037	1722	1	PL50x150	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP001	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP002	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP003	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP004	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP005	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP006	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP007	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP008	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP009	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP010	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP011	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP012	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP013	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP014	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP015	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP016	1746	1	PL50x280	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90690	01	CWUEAP017	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP018	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP019	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP020	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP021	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP022	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP023	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP024	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP025	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP026	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP027	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		

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	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**				Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.								
	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**				Document Status:	**Final Version**					Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**												

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90690	01	CWUEAP028	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP029	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP030	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP031	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP032	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP033	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP034	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP035	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP036	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP037	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP038	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP039	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90690	01	CWUEAP040	1747	1	PL10x135,2	S355J2	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90692	01	CWUHV026	1748	1	PL25x1385	S355MLO	954770	213957/1	1723001495	00020	A0377578		
123A90-FDL-ST-DD-90692	01	CWUHV026	1749	1	SPD1066,8x20	API5LX52	861928	170996/1	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90692	01	CWUHV026	1750	16	PL12x150	S355MLO	SU06198	PP400623/01	1723002082	00020	230807-FP01KS-0019A1-0002		
123A90-FDL-ST-DD-90728	00	CWLES001	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES002	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES003	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES004	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES005	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES006	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES007	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES008	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES009	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES010	1836	1	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES011	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES011	1840	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90728	00	CWLES012	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES012	1840	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90728	00	CWLES013	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES013	1840	1	IPE240	S355J2	73172		1723001808	00040	1100688212		
123A90-FDL-ST-DD-90728	00	CWLES014	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES014	1840	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90728	00	CWLES015	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES015	1841	1	IPE240	S355J2	141184A		1723001808	00040	9125		
123A90-FDL-ST-DD-90728	00	CWLES016	1836	2	PL8x46,9	S355J2	730316224	1957052	1723002024	00010	730/0294762		
123A90-FDL-ST-DD-90728	00	CWLES016	1841	1	IPE240	S355J2	141184A		1723001808	00040	9125		
123A90-FDL-ST-DD-90729	00	CWUES001	1834	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90729	00	CWUES001	1836	2	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES002	1835	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90729	00	CWUES003	1835	1	IPE240	S355J2	69401		1723001808	00040	4992491		
123A90-FDL-ST-DD-90729	00	CWUES003	1836	2	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90729	00	CWUES004	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90729	00	CWUES005	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES006	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES007	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES008	1836	1	PL8x46,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90729	00	CWUES009	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES010	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES011	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES012	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES013	1836	1	PL8x46,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES014	1837	1	PL10x73,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90729	00	CWUES015	1837	1	PL10x73,5	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90729	00	CWUES016	1838	1	PL10x135,2	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90729	00	CWUES017	1838	1	PL10x135,2	S355J2	VTAA02	VTAA0209.01.B.2797	1724001251	00010	616451		
123A90-FDL-ST-DD-90729	00	CWUES018	1839	1	PL8x111,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90729	00	CWUES019	1839	1	PL8x111,9	S355J2	730324440	1953052	1723002024	00010	730/0295845		
123A90-FDL-ST-DD-90729	00	CWUES020	1839	1	PL8x111,9	S355J2	430064	H003717	1724000297	00010	100346698		
123A90-FDL-ST-DD-90734	00	CWTPW101	1843	1	PL10x135,3	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90734	00	CWTPW101	1844	1	PL10x70	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90734	00	CWTPW102	1843	1	PL10x135,3	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90734	00	CWTPW102	1844	1	PL10x70	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90734	00	CWTPW107	1859	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90734	00	CWTPW108	1859	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90734	00	CWTPW109	1859	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90734	00	CWTPW110	1859	1	UNP220	S355J2	76914		1724000079	00720	771/3-2024		
123A90-FDL-ST-DD-90734	00	CWTPW113	1880	1	PL10x135,3	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90734	00	CWTPW114	1881	1	PL10x135,3	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90735	00	CWTPW103	1850	1	IPE220	S355J2	5529689		1724001529	00020	06-E-74162		
123A90-FDL-ST-DD-90735	00	CWTPW103	1864	6	PL8x42	S355J2	430064	H003717	1724000297	00010	1003486698		
123A90-FDL-ST-DD-90735	00	CWTPW103	1875	1	PL20x161,9	S355J2	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90737	00	CWTPW105	1854	1	IPE240	S355J2	73172		1723001808	00040	1450090816		
123A90-FDL-ST-DD-90737	00	CWTPW105	1855	1	PL10x120	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90737	00	CWTPW105	1856	4	PL8x56,9	S355J2	430064	H003717	1724000297	00010	1003486698		
123A90-FDL-ST-DD-90737	00	CWTPW105	1876	1	PL20x193,4	S355J2	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90737	00	CWTPW105	1879	1	PL10x120	S355J2	113550		1724001563	00030	2023-24/0402224701/2603		
123A90-FDL-ST-DD-90738	00	CWTPW106	1858	1	IPE220	S355J2	5529689		1724001529	00020	06-E-74162		
123A90-FDL-ST-DD-90738	00	CWTPW106	1864	4	PL8x42	S355J2	430064	H003717	1724000297	00010	1003486698		
123A90-FDL-ST-DD-90738	00	CWTPW106	1875	1	PL20x161,2	S355J2	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90739	00	CWTPW111	1860	1	IPE160	S355J2	5523446		1724001529	00280	69769098292733		
123A90-FDL-ST-DD-90739	00	CWTPW111	1870	1	PLATE20x135,8	S355J2	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90739	00	CWTPW112	1861	1	IPE160	S355J2	5523446		1724001529	00280	69769098292733		
123A90-FDL-ST-DD-90739	00	CWTPW112	1869	1	PLATE20x134,7	S355J2	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90753	00	CWTPSG001	1981	1	SPD660x406,4x20	S420MLO	763602	246556/1	1724000081	00120	A0378546		
123A90-FDL-ST-DD-90753	00	CWTPSG001	1982	1	Ø406,4x20,62	S355MLO	809305		1721002191	00020	B23312/1		
123A90-FDL-ST-DD-90753	00	CWTPSG001	1983	1	PL25x406,4	S355MLO	758016	191257/1	1723000863	00070	A0376574		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90753	00	CWTPSG001	1984	2	PL25x190,7	S355MLO	758016	191257/1	1723000863	00070	A0376574		
123A90-FDL-ST-DD-90753	00	CWTPSG001	1991	4	PL15x175,5	S355MLO	2355309	23EG005436	1723000953	00050	54ML210723_REV.01		
123A90-FDL-ST-DD-90754	00	CWTPSG002	1985	1	SPD660x30	S460MLOZ	765586	259122/1	1724000385	00090	A0379028		
123A90-FDL-ST-DD-90754	00	CWTPSG002	1986	1	SPD680x10	S355MLO	730324437		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90754	00	CWTPSG003	1986	1	SPD680x10	S355MLO	730324437		1723001341	00010	730/0294315		
123A90-FDL-ST-DD-90754	00	CWTPSG003	1988	1	SPD660x30	S460MLOZ	765586	259122/1	1724000385	00090	A0379028		
123A90-FDL-ST-DD-90755	00	CWTPSG004	1987	1	SPD660x406,4x20	S420MLO	763602	246556/1	1724000081	00120	A0378546		
123A90-FDL-ST-DD-90755	00	CWTPSG004	1989	1	PL25x524,7	S355MLO	758016	191257/1	1723000863	00070	A0376574		
123A90-FDL-ST-DD-90755	00	CWTPSG004	1990	2	PL25x249,9	S355MLO	758016	191257/1	1723000863	00070	A0376574		
123A90-FDL-ST-DD-90755	00	CWTPSG004	1991	4	PL15x175,5	S355MLO	2355309	23EG005436	1723000953	00050	54ML210723_REV.01		
123A90-FDL-ST-DD-90756	00	CWTPSG007	1992	1	PL25x720	S355MLO	758016	191257/1	1723000863	00070	A0376574		
123A90-FDL-ST-DD-90756	00	CWTPSG007	1993	2	PL25x347,5	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90756	00	CWTPSG008	1992	1	PL25x720	S355MLO	758016	191257/1	1723000863	00070	A0376574		
123A90-FDL-ST-DD-90756	00	CWTPSG008	1993	2	PL25x347,5	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90757	00	CWTPSG005	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG006	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG009	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG010	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG011	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG012	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG013	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG014	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG015	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG016	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG017	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90757	00	CWTPSG018	1994	1	PL25x77	S355MLO	869545	243329/2	1724000173	00050	A0378806		
123A90-FDL-ST-DD-90761	01	CWCF001	1995	1	Ø323,9x28,58	API5LX52	1233149		1724001443	00040	B28792/2		
123A90-FDL-ST-DD-90761	01	CWCF001	1996	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	1997	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	1998	3	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90761	01	CWCF001	1999	8	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2000	6	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2001	2	Ø168,3x14,27	API5LX52	55335KN		1724001443	00070	81992/23R		
123A90-FDL-ST-DD-90761	01	CWCF001	2002	2	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2003	4	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2004	8	Ø168,3x14,27	API5LX52	55335KN		1724001443	00070	81992/23R		
123A90-FDL-ST-DD-90761	01	CWCF001	2005	2	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2006	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2007	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2008	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2009	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2010	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2011	2	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2012	1	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		

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SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90761	01	CWCF001	2013	2	Ø219,1x18,26	API5LX52	R62209		1724001443	00060	E4131		
123A90-FDL-ST-DD-90761	01	CWCF001	2014	3	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2015	6	PL20x344,5	S355MLO	23207363	24E6011134	1724000216	00030	16024115722		
123A90-FDL-ST-DD-90761	01	CWCF001	2017	4	PL10x190	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90761	01	CWCF001	2018	6	Ø406,4x30,96	API5LX52	72581		1724001443	00020	B28478/4		
123A90-FDL-ST-DD-90761	01	CWCF001	2019	6	PL10x185	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90761	01	CWCF001	2020	6	PL10x203,2	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90761	01	CWCF001	2023	2	Ø219,1x23,01	API5LX52	R62208		1724001443	00050	E4135		
123A90-FDL-ST-DD-90761	01	CWCF001	2024	1	Ø323,9x28,58	API5LX52	1233149		1724001443	00040	B28792/2		
123A90-FDL-ST-DD-90761	01	CWCF001	2025	1	Ø323,9x28,58	API5LX52	1233149		1724001443	00040	B28792/2		
123A90-FDL-ST-DD-90761	01	CWCF001	2026	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2027	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2028	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2029	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2067	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2068	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2069	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2070	1	Ø323,9x28,58	API5LX52	1233149		1724001443	00040	B28792/2		
123A90-FDL-ST-DD-90761	01	CWCF001	2071	1	Ø406,4x36,53	API5LX52	189862		1724001443	00010	1180Au24		
123A90-FDL-ST-DD-90761	01	CWCF001	2108	1	SPD323,9x550x12	API5LX52	2371633	24EP012611	1724000962	00030	68ML170624		
123A90-FDL-ST-DD-90770	00	CWCF002	2060	2	Ø406,4x10,31	API5LX52	SF56697	PC038069-02	1722000931	00010	220523-FP01PI-0494A1-0001		
123A90-FDL-ST-DD-90770	00	CWCF002	2061	1	Ø323,9x28,58	API5LX52	1233149		1724001443	00040	B28792/2		
123A90-FDL-ST-DD-90770	00	CWCF002	2062	3	Ø168,3x9,52	API5LX52	375623		1722000931	01020	27508MU13		
123A90-FDL-ST-DD-90770	00	CWCF002	2063	6	Ø168,3x9,52	API5LX52	375623		1722000931	01020	27508MU13		
123A90-FDL-ST-DD-90770	00	CWCF002	2064	4	Ø273,1x11,13	API5LX52	70887		1722000931	03020	B 26068/1		
123A90-FDL-ST-DD-90770	00	CWCF002	2065	2	Ø168,3x9,52	API5LX52	375623		1722000931	01020	27508MU13		
123A90-FDL-ST-DD-90770	00	CWCF002	2066	2	Ø168,3x9,52	API5LX52	375623		1722000931	01020	27508MU13		
123A90-FDL-ST-DD-90773	00	CWTPMD001	2081	1	MANHOLE FLANGE	ASTMA182	289098		1724001998	00010	3.849		
123A90-FDL-ST-DD-90773	00	CWTPMD001	2086	1	FLANGE 24" SO 150#RF	ASTMA182	231484		1724001949	00010	2644		
123A90-FDL-ST-DD-90774	01	CWCF003	1998	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90774	01	CWCF003	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90774	01	CWCF003	2103	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		
123A90-FDL-ST-DD-90774	01	CWCF003	2109	1	RHS120X120X10	S355J2	1113861C		1722001973	00110	811903		
123A90-FDL-ST-DD-90774	01	CWCF003	2113	1	PL55x608	S355MLO	765033	284349/1	1724002330	00010	A0380125/C		
123A90-FDL-ST-DD-90775	01	CWCF004	2021	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90775	01	CWCF004	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90775	01	CWCF004	2103	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		
123A90-FDL-ST-DD-90775	01	CWCF004	2109	1	RHS120X120X10	S355J2	1113861C		1722001973	00110	811903		
123A90-FDL-ST-DD-90775	01	CWCF004	2113	1	PL55x608	S355MLO	765033	284349/1	1724002330	00010	A0380125/C		
123A90-FDL-ST-DD-90776	01	CWCF005	2090	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90776	01	CWCF005	2094	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		
123A90-FDL-ST-DD-90776	01	CWCF005	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90777	01	CWCF006	2091	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90777	01	CWCF006	2094	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		

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	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.		
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**	Date: 31/03/2026	
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90777	01	CWCF006	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90778	01	CWCF007	2092	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90778	01	CWCF007	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90778	01	CWCF007	2096	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		
123A90-FDL-ST-DD-90779	01	CWCF008	2093	1	Ø355,6x27,79	API5LX52	48673		1724001443	00030	D713/1		
123A90-FDL-ST-DD-90779	01	CWCF008	2095	1	PL20x250	S355MLO	861927	170992/1	1723001716	00100	A0376103/A		
123A90-FDL-ST-DD-90779	01	CWCF008	2096	1	SPD355,6x261x20	API5LX52	441102	24E9008247	1724000962	00020	68ML170624		
123A90-FDL-ST-DD-90783	00	CWUG015	2116	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90783	00	CWUG016	2116	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90783	00	CWUG017	2116	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90783	00	CWUG018	2116	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90784	00	CWUG019	2117	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90784	00	CWUG020	2117	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90784	00	CWUG021	2117	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90784	00	CWUG022	2117	1	PL50x200	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90785	00	CWUG027	2124	2	PL20x80	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90785	00	CWUG027	2125	1	PL20x180	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90785	00	CWUG027	2127	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90785	00	CWUG027	2128	1	PL20x141,4	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90785	00	CWUG027	2129	1	PL25x362	S355MLO	442256	24EP012618	1724000962	00010	68ML170624		
123A90-FDL-ST-DD-90785	00	CWUG027	2130	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90786	00	CWUG028	2124	2	PL20x80	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90786	00	CWUG028	2125	1	PL20x180	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90786	00	CWUG028	2127	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90786	00	CWUG028	2128	1	PL20x141,4	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90786	00	CWUG028	2129	1	PL25x362	S355MLO	442256	24EP012618	1724000962	00010	68ML170624		
123A90-FDL-ST-DD-90786	00	CWUG028	2130	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90787	00	CWUG029	2124	2	PL20x80	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90787	00	CWUG029	2125	1	PL20x180	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90787	00	CWUG029	2127	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90787	00	CWUG029	2128	1	PL20x141,4	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90787	00	CWUG029	2129	1	PL25x362	S355MLO	442256	24EP012618	1724000962	00010	68ML170624		
123A90-FDL-ST-DD-90787	00	CWUG029	2130	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90788	00	CWUG030	2124	2	PL20x80	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90788	00	CWUG030	2125	1	PL20x180	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90788	00	CWUG030	2127	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90788	00	CWUG030	2128	1	PL20x141,4	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90788	00	CWUG030	2129	1	PL25x362	S355MLO	442256	24EP012618	1724000962	00010	68ML170624		
123A90-FDL-ST-DD-90788	00	CWUG030	2130	1	PL20x150	S355MLO	861927	170991/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90789	00	CWS001	2187	1	Ø273,1x12,7	API5LX52	1241674		1724002081	00130	2213/4		
123A90-FDL-ST-DD-90789	00	CWS002	2187	1	Ø273,1x12,7	API5LX52	1241674		1724002081	00130	2213/4		
123A90-FDL-ST-DD-90790	00	CWS003	2188	1	PL20x500	S355MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90790	00	CWS004	2188	1	PL20x500	S355MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90790	00	CWS005	2188	1	PL20x500	S355MLO	869272	249151/1	1724000081	00120	A0378723		

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	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**					Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.							
	Project	**Hollandse Kust Noord Wind Park Project**												
	Job	**123A90 - Deck**												
ROSETTI MARINO	Discipline	**STRUCTURE**												
	DocumentTitle	**Material Traceability Report**					Document Status:	**Final Version**				Date: 31/03/2026		
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DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90790	00	CWS006	2188	1	PL20x500	S355MLO	869272	249151/1	1724000081	00120	A0378723		
123A90-FDL-ST-DD-90791	00	CWS007	2189	1	Ø273,1x12,7	API5LX52	1241674		1724002081	00130	2213/4		
123A90-FDL-ST-DD-90791	00	CWS008	2189	1	Ø273,1x12,7	API5LX52	1241674		1724002081	00130	2213/4		
123A90-FDL-ST-DD-90794	00	CWLWG001	2134	1	HEB800	S355J2	85628		1724001929	00040	5225534		
123A90-FDL-ST-DD-90794	00	CWLWG001	2135	1	HEB800	S355J2	85628		1724001929	00040	5225534		
123A90-FDL-ST-DD-90794	00	CWLWG001	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90794	00	CWLWG001	2138	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90794	00	CWLWG001	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90794	00	CWLWG001	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90794	00	CWLWG001	2141	2	PL15x542,5	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90794	00	CWLWG001	2144	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90795	00	CWLWG002	2134	1	HEB800	S355J2	62430		1723002143	00030	4853911		
123A90-FDL-ST-DD-90795	00	CWLWG002	2135	1	HEB800	S355J2	62430		1723002143	00030	4853911		
123A90-FDL-ST-DD-90795	00	CWLWG002	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90795	00	CWLWG002	2138	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90795	00	CWLWG002	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90795	00	CWLWG002	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90795	00	CWLWG002	2141	2	PL15x542,5	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90795	00	CWLWG002	2146	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90796	00	CWLWG003	2134	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90796	00	CWLWG003	2135	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90796	00	CWLWG003	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90796	00	CWLWG003	2138	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90796	00	CWLWG003	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90796	00	CWLWG003	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90796	00	CWLWG003	2142	2	PL15x541,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90796	00	CWLWG003	2144	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90797	00	CWLWG004	2134	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90797	00	CWLWG004	2135	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90797	00	CWLWG004	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90797	00	CWLWG004	2138	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90797	00	CWLWG004	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90797	00	CWLWG004	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90797	00	CWLWG004	2142	2	PL15x541,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90797	00	CWLWG004	2144	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90798	00	CWLWG005	2134	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90798	00	CWLWG005	2135	1	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90798	00	CWLWG005	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90798	00	CWLWG005	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90798	00	CWLWG005	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90798	00	CWLWG005	2142	2	PL15x541,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90798	00	CWLWG005	2143	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90798	00	CWLWG005	2146	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90799	00	CWLWG006	2134	1	HEB800	S355J2	85628		1724001929	00040	5225534		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

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123A90-FDL-ST-DD-90799	00	CWLWG006	2135	1	HEB800	S355J2	85628		1724001929	00040	5225534		
123A90-FDL-ST-DD-90799	00	CWLWG006	2137	2	PL15x686,6	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90799	00	CWLWG006	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90799	00	CWLWG006	2140	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90799	00	CWLWG006	2142	2	PL15x541,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90799	00	CWLWG006	2143	2	PL10x150	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90799	00	CWLWG006	2146	1	PL15x297	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90800	00	CWLWG007	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG008	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG009	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG010	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG011	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG012	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG013	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG014	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG015	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG016	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG017	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90800	00	CWLWG018	2136	1	PL50x400	S355J2	SK83550	PK00569901	1724000667	00010	Q8S1027039		
123A90-FDL-ST-DD-90801	00	CWG004	2139	12	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90801	00	CWG004	2166	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90801	00	CWG004	2167	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90801	00	CWG004	2173	12	PL20x540	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90801	00	CWG007	2139	12	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90801	00	CWG007	2166	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90801	00	CWG007	2167	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90801	00	CWG007	2173	12	PL20x540	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG005	2139	24	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90803	00	CWG005	2168	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90803	00	CWG005	2170	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90803	00	CWG005	2174	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG005	2182	4	PL20x131,2	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG005	2183	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG008	2139	24	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90803	00	CWG008	2168	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90803	00	CWG008	2170	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90803	00	CWG008	2174	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG008	2182	4	PL20x131,2	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90803	00	CWG008	2183	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90805	01	CWG006	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2157	10	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2160	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2163	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2171	2	HEB800	S355J2	85623		1724001929	00040	5225534		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**			Prepared by								
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**			Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.								
	Project	**Hollandse Kust Noord Wind Park Project**											
	Job	**123A90 - Deck**											
ROSETTI MARINO	Discipline	**STRUCTURE**											
	DocumentTitle	**Material Traceability Report**			Document Status:	**Final Version**					Date: 31/03/2026		
	RosettiDoc.Num.	**123A90MTR001**											

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90805	01	CWG006	2175	1	PL40x1785	S355MLO	909449	305604/1	1123000246	00220	A0326183		
123A90-FDL-ST-DD-90805	01	CWG006	2176	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90805	01	CWG006	2177	4	PL15x350	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2179	4	PL15x727	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG006	2180	4	PL15x150	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2157	10	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2160	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2163	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2171	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90805	01	CWG009	2175	1	PL40x1785	S355MLO	909449	305604/1	1123000246	00220	A0326183		
123A90-FDL-ST-DD-90805	01	CWG009	2176	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90805	01	CWG009	2177	4	PL15x350	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2179	4	PL15x727	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90805	01	CWG009	2180	4	PL15x150	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90808	00	CWG002	2139	24	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90808	00	CWG002	2168	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90808	00	CWG002	2170	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90808	00	CWG002	2174	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90808	00	CWG002	2182	4	PL20x131,2	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90808	00	CWG002	2183	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90808	00	CWG011	2139	24	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90808	00	CWG011	2168	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90808	00	CWG011	2170	2	HEB800	S355J2	85626		1724001929	00020	5225296		
123A90-FDL-ST-DD-90808	00	CWG011	2174	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90808	00	CWG011	2182	4	PL20x131,2	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90808	00	CWG011	2183	2	PL20x450	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90810	00	CWG001	2139	12	PL15x131,2	S355MLO	952378	223327/2	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90810	00	CWG001	2166	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90810	00	CWG001	2167	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90810	00	CWG001	2173	12	PL20x540	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90810	00	CWG012	2139	12	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90810	00	CWG012	2166	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90810	00	CWG012	2167	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90810	00	CWG012	2173	12	PL20x540	S355MLO	861927	170988/2	1724000850	00030	A0376103/A		
123A90-FDL-ST-DD-90812	01	CWG003	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG003	2157	10	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG003	2160	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG003	2163	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG003	2171	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90812	01	CWG003	2175	1	PL40x1785	S355MLO	909449	305604/1	1123000246	00220	A0326183		
123A90-FDL-ST-DD-90812	01	CWG003	2176	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90812	01	CWG003	2177	4	PL15x350	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG003	2179	4	PL15x727	S355MLO	58954		19879	00006	31		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90812	01	CWG003	2180	4	PL15x150	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2139	4	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2157	10	PL15x131,2	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2160	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2163	2	PL15x347	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2171	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90812	01	CWG013	2175	1	PL40x1785	S355MLO	909449	305604/1	1123000246	00220	A0326183		
123A90-FDL-ST-DD-90812	01	CWG013	2176	2	HEB800	S355J2	85623		1724001929	00040	5225534		
123A90-FDL-ST-DD-90812	01	CWG013	2177	4	PL15x350	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2179	4	PL15x727	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90812	01	CWG013	2180	4	PL15x150	S355MLO	58954		19879	00006	31		
123A90-FDL-ST-DD-90815	00	CWG010	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG014	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG015	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG016	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG017	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG018	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG019	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG020	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG021	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG022	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG023	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG024	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG025	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG026	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG027	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG028	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG029	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG030	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG031	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG032	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG033	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG034	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG035	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90815	00	CWG036	2184	1	PL50x400	S355MLO	2465148	24E8012492	1724001793	00050	16024676369		
123A90-FDL-ST-DD-90828	00	CWGS001	2191	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90828	00	CWGS002	2191	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90828	00	CWGS003	2191	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90828	00	CWGS004	2191	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90829	00	CWGS005	2192	1	PL50x150	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS006	2192	1	PL50x150	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS007	2192	1	PL50x150	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS008	2192	1	PL50x150	S355MLO	955033	245076/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS009	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by		
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.	
	Project	**Hollandse Kust Noord Wind Park Project**			
	Job	**123A90 - Deck**			
ROSETTI MARINO	Discipline	**STRUCTURE**			
	DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**	Date: 31/03/2026
	RosettiDoc.Num.	**123A90MTR001**			

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90829	00	CWGS010	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS011	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS012	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS013	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS014	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS015	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS016	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS025	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS026	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS027	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS028	2192	1	PL50x150	S355MLO	858668	244686/1	1724000081	00050	A0378413		
123A90-FDL-ST-DD-90829	00	CWGS037	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS038	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS039	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS040	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS041	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS042	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS043	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90829	00	CWGS044	2199	1	PL25x630	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90830	00	CWGS017	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90830	00	CWGS017	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS017	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS018	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90830	00	CWGS018	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS018	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS023	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90830	00	CWGS023	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS023	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS024	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90830	00	CWGS024	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90830	00	CWGS024	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS019	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90831	00	CWGS019	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS019	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS020	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90831	00	CWGS020	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS020	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS021	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90831	00	CWGS021	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS021	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS022	2193	1	PL50x250	S355MLO	34925	616381/1	1725000158	00010	1451083		
123A90-FDL-ST-DD-90831	00	CWGS022	2196	2	PL20x267	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90831	00	CWGS022	2197	2	PL20x70	S355MLO	RTAA63	RTAA6308.01.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS029	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90832	00	CWGS029	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS029	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS030	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90832	00	CWGS030	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS030	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS035	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90832	00	CWGS035	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS035	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS036	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90832	00	CWGS036	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90832	00	CWGS036	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS031	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90833	00	CWGS031	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS031	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS032	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90833	00	CWGS032	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS032	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS033	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90833	00	CWGS033	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS033	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS034	2195	1	PL50x250	S355MLO	34925	615396/1	1725000158	00020	1451080		
123A90-FDL-ST-DD-90833	00	CWGS034	2196	1	PL20x267	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90833	00	CWGS034	2197	1	PL20x70	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90834	00	CWGS045	2200	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS046	2200	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS047	2200	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS048	2200	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS053	2202	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS054	2202	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS055	2202	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90834	00	CWGS056	2202	1	PL25x550	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90835	00	CWGS049	2201	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90835	00	CWGS050	2201	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90835	00	CWGS051	2201	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90835	00	CWGS052	2201	1	Ø323,9x14,27	API5LX52	264212		1722000931	00100	B 25982/1		
123A90-FDL-ST-DD-90836	00	CWGS057	2203	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS058	2203	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS059	2203	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS060	2203	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS061	2204	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS062	2204	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS063	2204	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90836	00	CWGS064	2204	1	PL25x100	S355MLO	764342	246599/2	1724000846	00010	A0378558/C		
123A90-FDL-ST-DD-90846	00	CWGSCF001	2205	1	HEA340	S355J2	139893B		1723001808	00020	3344		

Empolyer/Contractor	**CROSSWIND**	Prepared by	
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name:	ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
Project	**Hollandse Kust Noord Wind Park Project**		
Job	**123A90 - Deck**		
Discipline	**STRUCTURE**		
DocumentTitle	**Material Traceability Report**	Document Status:	**Final Version**
RosettiDoc.Num.	**123A90MTR001**	Date:	31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90846	00	CWGSCF001	2209	10	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90846	00	CWGSCF001	2211	1	PL15x197	S355MLO	952378	223331/2	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90846	00	CWGSCF001	2213	1	PL15x197	S355MLO	952378	223331/2	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90846	00	CWGSCF002	2205	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90846	00	CWGSCF002	2209	10	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90846	00	CWGSCF002	2211	1	PL15x197	S355MLO	952378	223331/2	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90846	00	CWGSCF002	2213	1	PL15x197	S355MLO	952378	223331/2	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90847	00	CWGSCF003	2206	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90847	00	CWGSCF003	2209	4	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90847	00	CWGSCF003	2210	2	PL10x50	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90847	00	CWGSCF004	2206	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90847	00	CWGSCF004	2209	4	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90847	00	CWGSCF004	2210	2	PL10x50	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90848	00	CWGSCF005	2207	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90848	00	CWGSCF005	2208	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90848	00	CWGSCF005	2209	4	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90848	00	CWGSCF005	2210	2	PL10x50	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90848	00	CWGSCF010	2209	4	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90848	00	CWGSCF010	2210	2	PL10x50	S355MLO	730324437	1957046	1723002024	00020	730/0294315		
123A90-FDL-ST-DD-90848	00	CWGSCF010	2220	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90848	00	CWGSCF010	2221	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2209	12	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2214	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2215	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2216	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2217	1	PL20x300	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2218	1	PL20x400	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90849	00	CWGSCF006	2219	2	PL15x310	S355MLO	952378	223327/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2209	12	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2214	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2215	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2216	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2217	1	PL20x300	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2218	1	PL20x400	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90850	00	CWGSCF007	2219	2	PL15x310	S355MLO	952378	223327/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2209	12	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2214	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2217	1	PL20x300	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2218	1	PL20x400	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2219	2	PL15x310	S355MLO	952378	223327/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2222	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90851	00	CWGSCF008	2223	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2209	12	PL15x130	S355MLO	952378	223331/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2214	1	HEA340	S355J2	139893B		1723001808	00020	3344		

CROSSWIND	Empolyer/Contractor	**CROSSWIND**	Prepared by
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Name: ROSETTI MARINO SpA Galesi Antonio Quality Control Dept.
	Project	**Hollandse Kust Noord Wind Park Project**	
	Job	**123A90 - Deck**	
ROSETTI MARINO	Discipline	**STRUCTURE**	
	DocumentTitle	**Material Traceability Report**	Document Status: **Final Version**
	RosettiDoc.Num.	**123A90MTR001**	Date: 31/03/2026

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material	Heat	Plate	PurchaseOrder	Pos. Order	Certificate	ShortCode	Remarks
123A90-FDL-ST-DD-90852	00	CWGSCF009	2217	1	PL20x300	S355MLO	RTAA63	RTAA6308.01.B	1724000386	00030	52590		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2218	1	PL20x400	S355MLO	RTAA63	RTAA6305.04.A	1724000386	00030	52590		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2219	2	PL15x310	S355MLO	952378	223327/1	1723001743	00100	A0377760		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2222	1	HEA340	S355J2	139893B		1723001808	00020	3344		
123A90-FDL-ST-DD-90852	00	CWGSCF009	2223	1	HEA340	S355J2	139893B		1723001808	00020	3344		

3 MATERIAL CERTIFICATES

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
SPECIAL PIPING MATERIALS LTD	1123000246		Q012301906

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **VNA 1000144 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **0535334**

Date: **27-10-2010**

Order Status: **complete**

Inspection Dates
First: **10-10-2010**

final: **27-10-2010**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Project Materials GmbH**
Hansallee 201
D-40549 DÜSSELDORF

Order No.: **1335-10**

Description:

69 piece(s) of steel plate(s) **502183** kgs, as per attached inspection Certificate no.: **A0323850**

Specification

S460G2+M Z35* EN 10225 : 2009

Heat treatment/Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LR

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Vienna Office
Lloyd's Register

Kurt Huber 15 NOV 2010

Surveyor to Lloyd's Register EMEA

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voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

VNA1000144-1 K

Z02 Date 12-11-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0323850	A08 Order-No.:	0535334	A07 OrderDat.	23-07-2010 6D

A06 Customer	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF	B01 Product	Plate		
		B02 Material	S460G2+M Z35*	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1335-10				
		B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF				

A10 - Supplementary information
BOURI GRM GAS
*Z35 for ITEM NO.: 40, 50, 60, 110, 120

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED. FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. SPEC. 3417-000-S-SP-MEL-90002 REV.D01. SPEC. 08832.STR.MME-SPC REV.8.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
711094	263797/1	100	35,00	2500,0	10000	1		7.012	20-10-2010	TYPE 27
711094	263799/1	100	35,00	2500,0	10000	1		7.014	12-10-2010	TYPE 27
711094	263801/1	100	35,00	2500,0	10000	1		7.012	12-10-2010	TYPE 27
711094	263803/1	100	35,00	2500,0	10000	1		7.011	12-10-2010	TYPE 27
711094	263828/1	50	30,00	3050,0	12000	1		8.801	14-10-2010	TYPE 28
711094	263830/1	50	30,00	3050,0	12000	1		8.799	20-10-2010	TYPE 28
711094	263832/1	50	30,00	3050,0	12000	1		8.799	20-10-2010	TYPE 28
711094	263834/1	50	30,00	3050,0	12000	1		8.801	14-10-2010	TYPE 28
711094	263852/2	10	15,00	3050,0	12000	1		4.482	20-10-2010	TYPE 27
711094	263852/1	10	15,00	3050,0	12000	1		4.481	20-10-2010	TYPE 27
711094	263854/2	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27
711094	263854/1	10	15,00	3050,0	12000	1		4.486	20-10-2010	TYPE 27
711094	263856/2	10	15,00	3050,0	12000	1		4.483	20-10-2010	TYPE 27
711094	263856/1	10	15,00	3050,0	12000	1		4.480	20-10-2010	TYPE 27
711094	263858/1	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
711094	263858/2	10	15,00	3050,0	12000	1	4.484	20-10-2010	TYPE 27	
711094	263860/1	10	15,00	3050,0	12000	1	4.493	20-10-2010	TYPE 27	
711094	263860/2	10	15,00	3050,0	12000	1	4.484	20-10-2010	TYPE 27	
711094	263862/1	10	15,00	3050,0	12000	1	4.486	20-10-2010	TYPE 27	
711094	263862/2	10	15,00	3050,0	12000	1	4.483	20-10-2010	TYPE 27	
711094	263864/1	10	15,00	3050,0	12000	1	4.484	20-10-2010	TYPE 27	
711094	263864/2	10	15,00	3050,0	12000	1	4.485	20-10-2010	TYPE 27	
711094	266037/1	110	35,00	2800,0	7000	1	5.482	27-10-2010	TYPE 28	
711096	263805/1	100	35,00	2500,0	10000	1	7.013	20-10-2010	TYPE 27	
711096	263807/1	100	35,00	2500,0	10000	1	7.011	12-10-2010	TYPE 27	
711096	263809/1	100	35,00	2500,0	10000	1	7.015	12-10-2010	TYPE 27	
711096	263811/1	100	35,00	2500,0	10000	1	7.010	12-10-2010	TYPE 27	
711096	263826/1	50	30,00	3050,0	12000	1	8.803	22-10-2010	TYPE 28	
711096	263836/1	50	30,00	3050,0	12000	1	8.799	22-10-2010	TYPE 28	
711096	263838/1	50	30,00	3050,0	12000	1	8.799	22-10-2010	TYPE 28	
711096	263840/1	50	30,00	3050,0	12000	1	8.801	22-10-2010	TYPE 28	
711096	264908/1	60	40,00	3050,0	12000	1	11.689	22-10-2010	TYPE 28	
711096	264909/1	60	40,00	3050,0	12000	1	11.688	22-10-2010	TYPE 28	
711096	264910/1	60	40,00	3050,0	12000	1	11.688	22-10-2010	TYPE 28	
711098	263787/1	30	25,00	3050,0	12000	1	7.352	12-10-2010	TYPE 27	
711098	263789/1	30	25,00	3050,0	12000	1	7.349	12-10-2010	TYPE 27	
711098	263790/1	30	25,00	3050,0	12000	1	7.356	12-10-2010	TYPE 27	
711098	264900/1	60	40,00	3050,0	12000	1	11.692	24-10-2010	TYPE 28	
711098	264901/1	60	40,00	3050,0	12000	1	11.700	24-10-2010	TYPE 28	
711098	264902/1	60	40,00	3050,0	12000	1	11.684	24-10-2010	TYPE 28	
711098	264903/1	60	40,00	3050,0	12000	1	11.685	24-10-2010	TYPE 28	
711098	264904/1	60	40,00	3050,0	12000	1	11.683	24-10-2010	TYPE 28	
711098	264905/1	60	40,00	3050,0	12000	1	11.694	24-10-2010	TYPE 28	
711098	264906/1	60	40,00	3050,0	12000	1	11.696	24-10-2010	TYPE 28	
711098	264907/1	60	40,00	3050,0	12000	1	11.692	24-10-2010	TYPE 28	
711099	263791/1	70	30,00	2500,0	12000	1	7.220	10-10-2010	TYPE 27	
711099	263793/1	70	30,00	2500,0	12000	1	7.220	11-10-2010	TYPE 27	
711099	263795/1	70	30,00	2500,0	12000	1	7.218	11-10-2010	TYPE 27	
711099	264911/1	60	40,00	3050,0	12000	1	11.689	21-10-2010	TYPE 28	
711099	264912/1	60	40,00	3050,0	12000	1	11.692	21-10-2010	TYPE 28	
815211	265326/1	120	50,00	2000,0	8500	1	6.788	20-10-2010	TYPE 28	
815211	265328/1	120	50,00	2000,0	8500	1	6.783	20-10-2010	TYPE 28	

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Z02
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Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
815211	265339/1	80	30,00	2900,0	8500	1		5.923	14-10-2010	TYPE 27
815211	265341/1	80	30,00	2900,0	8500	1		5.923	14-10-2010	TYPE 27
815211	265343/1	80	30,00	2900,0	8500	1		5.925	14-10-2010	TYPE 27
815211	265345/1	80	30,00	2900,0	8500	1		5.924	14-10-2010	TYPE 27
815211	265347/1	80	30,00	2900,0	8500	1		5.924	14-10-2010	TYPE 27
815211	265349/1	80	30,00	2900,0	8500	1		5.923	14-10-2010	TYPE 27
815211	265351/1	20	20,00	3050,0	12000	1		5.934	14-10-2010	TYPE 27
815214	265338/1	40	20,00	3050,0	12000	1		5.905	27-10-2010	TYPE 28
815214	265340/1	40	20,00	3050,0	12000	1		5.934	27-10-2010	TYPE 28
815214	265342/1	40	20,00	3050,0	12000	1		5.930	15-10-2010	TYPE 28
815214	265344/1	40	20,00	3050,0	12000	1		5.919	27-10-2010	TYPE 28
815214	265346/1	40	20,00	3050,0	12000	1		5.934	14-10-2010	TYPE 28
815214	265348/1	40	20,00	3050,0	12000	1		5.931	14-10-2010	TYPE 28
815214	265350/1	40	20,00	3050,0	12000	1		5.934	19-10-2010	TYPE 28
815214	265352/1	90	30,00	2800,0	8000	1		5.385	14-10-2010	TYPE 27
904380	263823/1	90	30,00	2800,0	8000	1		5.386	12-10-2010	TYPE 27
904882	264002/1	10	15,00	3050,0	12000	1		4.430	22-10-2010	TYPE 27
	Sum					69		502.183		

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.

B14 - Supplementary information

EN 10163 - A3 - Repair-welding not permitted
Dimensional tolerances acc. EN 10029/91
Flatness acc. EN 10029/91 class N
Thicknesstolerance acc. EN 10029/91 class A

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Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

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Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=		.150				.015														
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.43	.22	.090	.110	.900
711094	.029	.330	1.600	.007	.0006	.033	.170	.170	.004	.160	.005	.040	.013	.0037	.0002	.35	.14	.045	.058	.504
711096	.029	.330	1.620	.007	.0005	.037	.160	.180	.004	.160	.005	.039	.012	.0050	.0002	.36	.14	.044	.056	.504
711098	.029	.330	1.610	.009	.0007	.034	.170	.170	.005	.160	.005	.040	.013	.0050	.0002	.36	.14	.045	.058	.505
711099	.029	.340	1.630	.006	.0008	.034	.170	.190	.010	.180	.005	.039	.013	.0051	.0002	.36	.14	.044	.057	.550
815211	.027	.316	1.610	.009	.0015	.035	.173	.180	.003	.150	.004	.040	.012	.0053	.0002	.35	.14	.044	.056	.506
815214	.031	.314	1.590	.008	.0006	.030	.169	.170	.003	.160	.004	.040	.013	.0045	.0002	.35	.14	.044	.057	.502
904380	.033	.320	1.600	.006	.0006	.039	.180	.180	.005	.180	.005	.039	.013	.0056	.0003	.36	.15	.044	.057	.545
904882	.037	.340	1.650	.008	.0010	.031	.180	.180	.004	.160	.003	.039	.014	.0054	.0002	.37	.15	.042	.056	.524

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

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Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
	>=						460	460	540		17.0		
Set values	<=								700			93.00	93.00
711094	263854	30,0	16.33	F	O	T		536	636	A5	23.4		84.31
	263858	30,0	16.34	F	O	T		505	615	A5	21.6		82.17
	263864	30,0	16.37	F	O	T		527	638	A5	25.8		82.51
904882	250304	30,0	18.32	F	O	T	559	556	623	A5	21.7	89.63	89.22
	>=						420	420	530		17.0		
Set values	<=								690			90.00	90.00
711098	258094	30,0	25.56	F	O	T	539	533	600	A5	21.3	89.84	88.91
815211	265351	30,0	20.59	F	O	T		540	601	A5	23.3		89.82
815214	265348	30,0	20.79	F	O	T		545	610	A5	23.9		89.24
	265350	30,0	20.48	F	O	T		529	619	A5	24.0		85.48
	>=						420	420	520		17.0		
Set values	<=								680			90.00	90.00
711094	256739	30,0	40.12	F	O	T		542	622	A5	23.0		87.05
	263797	30,0	35.62	F	O	T		541	625	A5	24.0		86.59
	263830	30,0	30.93	F	O	T		550	615	A5	24.5		89.42
711096	256738	30,0	40.17	F	O	T		498	597	A5	24.8		83.29
	263805	30,0	35.54	F	O	T		535	616	A5	24.6		86.79
	263838	30,0	30.87	F	O	T		533	594	A5	25.5		89.63
	264910	30,0	40.71	F	O	T		522	602	A5	24.8		86.73
711098	264901	30,0	40.67	F	O	T		510	601	A5	26.5		84.87
	264904	30,0	40.69	F	O	T		522	611	A5	25.2		85.42
	264906	30,0	40.55	F	O	T		543	624	A5	23.6		86.93
	264907	30,0	40.70	F	O	T		509	604	A5	24.2		84.23
711099	260530	30,0	35.24	F	O	T		544	613	A5	23.3		88.75
	264912	30,0	40.58	F	O	T		541	620	A5	24.0		87.24
815211	265349	30,0	30.68	F	O	T		527	586	A5	25.4		89.90
815214	265352	30,0	30.68	F	O	T		542	604	A5	24.6		89.85
904380	263823	30,0	30.87	F	O	T	548	545	615	A5	22.9	89.01	88.56
	>=						415	415	515		17.0		
Set values	<=								675			90.00	90.00
815211	265328	ø	10.00	F	V	T		488	573	A5	26.9		85.10

Z03
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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

voestalpine

Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Reh/Rm %	C11 Rp0,2/Rm %

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼
C02;Dir:
T: transverse
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z03
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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
Set values >=						-40	42	42	42	60
711094	263801	CV 10x10	F	O	L	-40	364	357	345	356
	263830	CV 10x10	F	O	L	-40	364	380	377	374
	263856	CV 10x10	F	O	L	-40	387	386	384	385
	263864	CV 10x10	F	O	L	-40	368	415	398	393
711096	263811	CV 10x10	F	O	L	-40	365	369	392	375
	263838	CV 10x10	F	O	L	-40	366	357	358	360
	264910	CV 10x10	F	O	L	-40	374	356	370	367
711098	263790	CV 10x10	F	O	L	-40	364	352	363	360
	264901	CV 10x10	F	O	L	-40	363	342	362	356
	264904	CV 10x10	F	O	L	-40	372	362	372	368
	264906	CV 10x10	F	O	L	-40	372	358	373	368
	264907	CV 10x10	F	O	L	-40	362	366	364	364
711099	260530	CV 10x10	F	O	L	-40	372	363	377	371
	264912	CV 10x10	F	O	L	-40	370	366	367	368
815211	265328	CV 10x10	F	O	L	-40	362	340	376	360
	265349	CV 10x10	F	O	L	-40	346	347	360	351
	265351	CV 10x10	F	O	L	-40	365	358	358	361
	265328	CV 10x10	F	K	L	-40	396	398	397	397
815214	265348	CV 10x10	F	O	L	-40	344	344	343	344
	265352	CV 10x10	F	O	L	-40	332	338	351	340
904380	263823	CV 10x10	F	O	L	-40	337	467	334	379
904882	264002	CV 10x10	F	O	L	-40	343	367	364	358

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½
O: surface
C02;Dir:
L: longitudinal
C42;SV: single value
C43;AV: average value

Z03
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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

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ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						424	424	424	25	25	25	35
Set values <=												
815214	265348	Ø	6.09	F	S	593	593	595	84	82	83	83
>=						416	416	416	25	25	25	35
Set values <=												
711094	256751	Ø	9.99	F	S	594	592	595	82	80	81	81
711096	264910	Ø	10.01	F	S	567	568	568	83	83	83	83
711098	264906	Ø	10.02	F	S	578	578	577	79	73	83	78
711099	260530	Ø	10.00	F	S	567	567	567	81	84	84	83
>=						412	412	412	25	25	25	35
Set values <=												
815211	265328	Ø	10.03	F	S	550	551	551	73	79	82	78

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: KH
Lloyd's Register
15 NOV 2010

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis)

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
	>=		.150				.015														
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100		.43	.22	.090	.110	.900
711094	256751	.034	.332	1.600	.007	.0005	.030	.176	.170	.003	.160	.005	.040	.012	.0047	.0002	.36	.15	.045	.057	.509
	263830	.030	.331	1.630	.007	.0007	.035	.171	.180	.004	.160	.005	.039	.013	.0042	.0002	.36	.14	.044	.057	.515
	263832	.027	.323	1.590	.007	.0005	.033	.169	.180	.004	.160	.005	.039	.012	.0047	.0002	.35	.14	.044	.056	.513
	263854	.031	.337	1.630	.007	.0005	.034	.173	.180	.003	.160	.005	.040	.013	.0042	.0002	.36	.15	.045	.058	.516
	266037	.030	.337	1.640	.007	.0005	.032	.176	.180	.004	.160	.005	.040	.013	.0044	.0002	.36	.14	.045	.058	.520
711096	256737	.028	.340	1.650	.006	.0003	.038	.160	.180	.004	.160	.005	.039	.012	.0047	.0002	.36	.14	.044	.056	.504
	263809	.026	.340	1.650	.007	.0003	.038	.162	.180	.004	.160	.005	.039	.012	.0047	.0002	.36	.14	.044	.056	.506
	263840	.025	.330	1.600	.007	.0005	.037	.159	.180	.004	.160	.005	.038	.012	.0046	.0002	.35	.14	.043	.055	.503
	264909	.027	.341	1.640	.007	.0005	.039	.161	.180	.004	.160	.005	.039	.013	.0047	.0002	.36	.14	.044	.057	.505
711098	264901	.031	.341	1.640	.009	.0008	.034	.173	.180	.004	.170	.005	.040	.012	.0046	.0002	.36	.15	.045	.057	.527
	264904	.030	.340	1.630	.009	.0006	.034	.172	.180	.005	.170	.004	.040	.012	.0050	.0002	.36	.14	.044	.056	.527
	264906	.029	.333	1.640	.009	.0005	.032	.169	.180	.004	.170	.004	.040	.012	.0052	.0002	.36	.14	.044	.056	.523
	264907	.029	.333	1.610	.008	.0007	.032	.172	.180	.005	.170	.005	.039	.012	.0044	.0002	.36	.14	.044	.056	.527
711099	263791	.028	.340	1.650	.007	.0005	.033	.178	.180	.008	.170	.005	.039	.013	.0044	.0002	.36	.14	.044	.057	.536
	264912	.029	.344	1.640	.006	.0007	.034	.173	.190	.009	.180	.005	.039	.013	.0046	.0002	.36	.15	.044	.057	.552
815211	265339	.026	.318	1.620	.009	.0012	.035	.167	.180	.003	.150	.004	.039	.012	.0053	.0002	.35	.14	.043	.055	.500
	265351	.027	.322	1.630	.009	.0013	.035	.169	.180	.003	.160	.004	.040	.013	.0050	.0002	.36	.14	.044	.057	.512
815214	265338	.035	.332	1.630	.008	.0008	.032	.175	.170	.003	.160	.005	.040	.013	.0048	.0002	.37	.15	.045	.058	.508
	265352	.035	.329	1.620	.008	.0010	.032	.172	.170	.004	.160	.004	.040	.013	.0052	.0002	.36	.15	.044	.057	.506
904380	242234	.034	.320	1.580	.007	.0006	.040	.180	.170	.004	.170	.005	.039	.013	.0048	.0002	.36	.15	.044	.057	.524
904882	248340	.031	.340	1.640	.007	.0006	.031	.170	.170	.003	.160	.003	.039	.014	.0050	.0002	.36	.15	.042	.056	.503

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the delivery specified above corresponds to the order (and standard).

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: KH
Lloyd's Register

15 NOV 2010

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02

Inspection certificate

EN 10204 - 3.2

VNA1000144-1 K

Z02 Date 12-11-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0323850/US	A08 Order-No.:	0535334	A07 OrderDat.	23-07-2010 6D

A06 Customer: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1335-10

A06 Consignee: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

A10 - Supplementary information
*Z35 for ITEM NO.: 40, 50, 60, 110, 120

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
711094	263797/1	100	35,00	2500,0	10000	1		7.012	20-10-2010	TYPE 27
711094	263799/1	100	35,00	2500,0	10000	1		7.014	12-10-2010	TYPE 27
711094	263801/1	100	35,00	2500,0	10000	1		7.012	12-10-2010	TYPE 27
711094	263803/1	100	35,00	2500,0	10000	1		7.011	12-10-2010	TYPE 27
711094	263828/1	50	30,00	3050,0	12000	1		8.801	14-10-2010	TYPE 28
711094	263830/1	50	30,00	3050,0	12000	1		8.799	20-10-2010	TYPE 28
711094	263832/1	50	30,00	3050,0	12000	1		8.799	20-10-2010	TYPE 28
711094	263834/1	50	30,00	3050,0	12000	1		8.801	14-10-2010	TYPE 28
711094	263852/2	10	15,00	3050,0	12000	1		4.482	20-10-2010	TYPE 27
711094	263852/1	10	15,00	3050,0	12000	1		4.481	20-10-2010	TYPE 27
711094	263854/1	10	15,00	3050,0	12000	1		4.486	20-10-2010	TYPE 27
711094	263854/2	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27
711094	263856/2	10	15,00	3050,0	12000	1		4.483	20-10-2010	TYPE 27
711094	263856/1	10	15,00	3050,0	12000	1		4.480	20-10-2010	TYPE 27
711094	263858/1	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27
711094	263858/2	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27
711094	263860/2	10	15,00	3050,0	12000	1		4.484	20-10-2010	TYPE 27

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: KH
Lloyd's Register

15 NOV 2010

Z02
Inspection representative voestalpine Grobblech (Level 3)
Bindreiter

Abnahme

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
711094	263860/1	10	15,00	3050,0	12000	1	4.493	20-10-2010	TYPE 27	
711094	263862/2	10	15,00	3050,0	12000	1	4.483	20-10-2010	TYPE 27	
711094	263862/1	10	15,00	3050,0	12000	1	4.486	20-10-2010	TYPE 27	
711094	263864/2	10	15,00	3050,0	12000	1	4.485	20-10-2010	TYPE 27	
711094	263864/1	10	15,00	3050,0	12000	1	4.484	20-10-2010	TYPE 27	
711094	266037/1	110	35,00	2800,0	7000	1	5.482	27-10-2010	TYPE 28	
711096	263805/1	100	35,00	2500,0	10000	1	7.013	20-10-2010	TYPE 27	
711096	263807/1	100	35,00	2500,0	10000	1	7.011	12-10-2010	TYPE 27	
711096	263809/1	100	35,00	2500,0	10000	1	7.015	12-10-2010	TYPE 27	
711096	263811/1	100	35,00	2500,0	10000	1	7.010	12-10-2010	TYPE 27	
711096	263826/1	50	30,00	3050,0	12000	1	8.803	22-10-2010	TYPE 28	
711096	263836/1	50	30,00	3050,0	12000	1	8.799	22-10-2010	TYPE 28	
711096	263838/1	50	30,00	3050,0	12000	1	8.799	22-10-2010	TYPE 28	
711096	263840/1	50	30,00	3050,0	12000	1	8.801	22-10-2010	TYPE 28	
711096	264908/1	60	40,00	3050,0	12000	1	11.689	22-10-2010	TYPE 28	
711096	264909/1	60	40,00	3050,0	12000	1	11.688	22-10-2010	TYPE 28	
711096	264910/1	60	40,00	3050,0	12000	1	11.688	22-10-2010	TYPE 28	
711098	263787/1	30	25,00	3050,0	12000	1	7.352	12-10-2010	TYPE 27	
711098	263789/1	30	25,00	3050,0	12000	1	7.349	12-10-2010	TYPE 27	
711098	263790/1	30	25,00	3050,0	12000	1	7.356	12-10-2010	TYPE 27	
711098	264900/1	60	40,00	3050,0	12000	1	11.692	24-10-2010	TYPE 28	
711098	264901/1	60	40,00	3050,0	12000	1	11.700	24-10-2010	TYPE 28	
711098	264902/1	60	40,00	3050,0	12000	1	11.684	24-10-2010	TYPE 28	
711098	264903/1	60	40,00	3050,0	12000	1	11.685	24-10-2010	TYPE 28	
711098	264904/1	60	40,00	3050,0	12000	1	11.683	24-10-2010	TYPE 28	
711098	264905/1	60	40,00	3050,0	12000	1	11.694	24-10-2010	TYPE 28	
711098	264906/1	60	40,00	3050,0	12000	1	11.696	24-10-2010	TYPE 28	
711098	264907/1	60	40,00	3050,0	12000	1	11.692	24-10-2010	TYPE 28	
711099	263791/1	70	30,00	2500,0	12000	1	7.220	10-10-2010	TYPE 27	
711099	263793/1	70	30,00	2500,0	12000	1	7.220	11-10-2010	TYPE 27	
711099	263795/1	70	30,00	2500,0	12000	1	7.218	11-10-2010	TYPE 27	
711099	264911/1	60	40,00	3050,0	12000	1	11.689	21-10-2010	TYPE 28	
711099	264912/1	60	40,00	3050,0	12000	1	11.692	21-10-2010	TYPE 28	
815211	265326/1	120	50,00	2000,0	8500	1	6.788	20-10-2010	TYPE 28	
815211	265328/1	120	50,00	2000,0	8500	1	6.783	20-10-2010	TYPE 28	
815211	265339/1	80	30,00	2900,0	8500	1	5.923	14-10-2010	TYPE 27	
815211	265341/1	80	30,00	2900,0	8500	1	5.923	14-10-2010	TYPE 27	

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: KH
Lloyd's Register
15 NOV 2010

Z02 Inspection representative voestalpine Grobblech (Level 3) Bindreiter

voestalpine

Abnahme

voestalpine ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	Abnahmedatum	Sachnummer
815211	265343/1	80	30,00	2900,0	8500	1		5.925	14-10-2010	TYPE 27
815211	265345/1	80	30,00	2900,0	8500	1		5.924	14-10-2010	TYPE 27
815211	265347/1	80	30,00	2900,0	8500	1		5.924	14-10-2010	TYPE 27
815211	265349/1	80	30,00	2900,0	8500	1		5.923	14-10-2010	TYPE 27
815211	265351/1	20	20,00	3050,0	12000	1		5.934	14-10-2010	TYPE 27
815214	265338/1	40	20,00	3050,0	12000	1		5.905	27-10-2010	TYPE 28
815214	265340/1	40	20,00	3050,0	12000	1		5.934	27-10-2010	TYPE 28
815214	265342/1	40	20,00	3050,0	12000	1		5.930	15-10-2010	TYPE 28
815214	265344/1	40	20,00	3050,0	12000	1		5.919	27-10-2010	TYPE 28
815214	265346/1	40	20,00	3050,0	12000	1		5.934	14-10-2010	TYPE 28
815214	265348/1	40	20,00	3050,0	12000	1		5.931	14-10-2010	TYPE 28
815214	265350/1	40	20,00	3050,0	12000	1		5.934	19-10-2010	TYPE 28
815214	265352/1	90	30,00	2800,0	8000	1		5.385	14-10-2010	TYPE 27
904380	263823/1	90	30,00	2800,0	8000	1		5.386	12-10-2010	TYPE 27
904882	264002/1	10	15,00	3050,0	12000	1		4.430	22-10-2010	TYPE 27
	Sum					69		502.183		

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.

Remarks

SPECIFICATION
Ultrasonic examination acc. to EN 10160, class S1/Body, class E2/Edge Zone;

TEST EQUIPMENT
Apparatus: mechanized ultrasonic "in-Line testing system" (Manufacturer: NDT-Systems & Services), and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH), and Krautkrämer USK 7 no.: 3;
Probe: 3STSE 18.3/8 PB5, SEZ5R10RS-3, SE3 18.3/10 5A, (5MHz) (in-line AUT), S140 (4MHz) 3T/1R (off-line AUT), SEB 4E (4MHz), (MUT);
watergapcoupling

RESULT
The plates are within the specification.

NOTE
Operator:
Brandl P., Krahl Ch., Steininger R., Mayr G; level 1 acc. to ÖNORM-EN 473.
Kaufmann N., Prieschl N., Krichbaum W; level 2 acc. to ÖNORM-EN 473

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA Vienna Office Initials: KH Lloyd's Register

15 NOV 2010

Z02 Inspection representative voestalpine Grobblech (Level 3) Bindreiter

voestalpine

Abnahme

voestalpine ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
SPECIAL PIPING MATERIALS LTD	1123000246		Q012301903

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MELLITAH OIL & GAS B.V – BOURI GAS UTILISATION PROJECT
VENDORS FRONT SHEET (FOR A4 DOCUMENTS ONLY)

DOCUMENT TITLE	MATERIAL TEST CERTIFICATES (PLATES BATCH 3)

TOTAL No. OF PAGES (INCLUDING FRONT SHEETS)	16
VENDORS ORDER No.	1335-10

VENDORS OWN DOCUMENT No.	VENDORS REVISION	DATE	VENDORS APPROVAL NAME AND SIGNATURE
1335_MTC_8_0	0	18.04.11	B. Scholz

MUSTANG

MELLITAH OIL & GAS B.V – BOURI GAS UTILISATION PROJECT

REVIEW DOES NOT CONSTITUTE ACCEPTANCE OF DESIGN DETAILS, CALCULATIONS, TEST METHODS OR MATERIALS DEVELOPED OR SELECTED BY VENDOR, NOR DOES IT RELIEVE VENDOR FROM FULL COMPLIANCE WITH CONTRACTUAL OR OTHER OBLIGATIONS.

- ☐ 1 Accepted (Manufacturer may proceed).
- ☐ 2 (code not used)
- ☐ 3 Proceed – with the exception of noted comments. Address comments and resubmit
- ☐ 4 Manufacturer may not proceed. Revise and resubmit.
- ☐ 5 (code not used)
- ☐ 6 For Information Only
- ☐ 7 Void / Cancelled

NAME: ..... DATE: .....

SIGNATURE: .....

VENDOR NAME:- **PROJECT MATERIALS GMBH**

EQUIPMENT DESCRIPTION :- **STEEL PLATES ITEMS 1 TO 12**

TAG NOS :-

MODEL TYPE NOS :-

1133638-PO No.	SDRS No.	Sequence No.	Rev.
1133638-100.2	C04	002	01

This document is CONFIDENTIAL and the sole property of MELLITAH OIL AND GAS B.V.Libyan Branch It shall neither be shown to third Parties nor used for purposes other than those for which it has been sent.

Certificate Number: **VNA 1100040 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **0535665**

Date: **22-03-2011**

Order Status: **complete**

Inspection Dates
First: **28-01-2011**

final: **08-03-2011**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Project Materials GmbH**
Hansallee 201
D-40549 DÜSSELDORF

Order No.: **1335-10**

Description:

60 piece(s) of steel plate(s) **448023** kgs, as per attached inspection Certificate no.: **A0326183**

Specification

S460G2+M Z35* EN 10225 : 2009

Heat treatment/Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LR

☒ REVIEWED
☐ WITNESSED
Germanischer Lloyd Industrial Services
H. Bruch
8. APR. 2011

Lloyd's Register EMEA
Vienna Office
Lloyd's Register
Kurt Huber 05 APR 2011
Surveyor to Lloyd's Register EMEA

A member of the Lloyd's Register Group

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Form 1123 (2008.07)

LLOYD'S REGISTER GROUP PAPER 10/12/2005

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

VNA1100040-1 K

Z02 Date 05-04-2011

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0326183	A08 Order-No.:	0535665	A07 OrderDat.	26-10-2010

Date of dispatch 22-03-2011 6D

A06 Customer	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF	B01 Product	Plate		
A07 OrderNo.	1335-10	B02 Material	S460G2+M Z35*	B03 Standard	EN 10225 : 2009
A06 Consignee	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information

ITEM 38
BOURI GRM GAS
ITEM 39
ITEM 40
ITEM 41
ITEM 42
ITEM 43
ITEM 44
ITEM 45
ITEM 46
ITEM 47
ITEM 48
ITEM 49
*Z35 tests for ITEM NO.: 40, 50, 60, 70, 80, 90, 100.

B03 - Supplementary requirements

MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED. FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. SPEC. 3417-000-S-SP-MEL-90002 REV.D01. SPEC. 08832.STR.MME-SPC REV.8.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
708825	305721/2	20	25,00	2000,0	12000	1		4.834	81967	16-02-2011	TYPE 27
708825	305721/1	20	25,00	2000,0	12000	1		4.834	81967	16-02-2011	TYPE 27
713008	308654/1	100	90,00	3050,0	6000	1		13.144	81967	21-02-2011	TYPE 28

A04
Symbol of the manufacturer's work

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B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
714305	314984/1	90	80,00	2500,0	6000	1		9.614	81967	08-03-2011	TYPE 28
714501	305163/1	100	90,00	3050,0	6000	1		13.101	81967	17-02-2011	TYPE 28
714501	305164/1	100	90,00	3050,0	6000	1		13.116	81967	19-02-2011	TYPE 28
714501	305165/1	100	90,00	3050,0	6000	1		13.123	81967	21-02-2011	TYPE 28
714501	305166/1	100	90,00	3050,0	6000	1		13.114	81967	17-02-2011	TYPE 28
714502	305167/1	100	90,00	3050,0	6000	1		13.123	81967	02-03-2011	TYPE 28
714502	305168/1	100	90,00	3050,0	6000	1		13.166	81967	21-02-2011	TYPE 28
714502	305693/1	90	80,00	2500,0	6000	1		9.553	81967	16-02-2011	TYPE 28
815212	302018/1	10	15,00	2500,0	12000	1		3.682	81967	03-02-2011	TYPE 27
815214	304563/1	20	25,00	2000,0	12000	1		4.837	81967	11-02-2011	TYPE 27
816585	305719/1	20	25,00	2000,0	12000	1		4.807	81967	17-02-2011	TYPE 27
816585	305719/2	20	25,00	2000,0	12000	1		4.830	81967	16-02-2011	TYPE 27
816585	305720/1	20	25,00	2000,0	12000	1		4.834	81967	14-02-2011	TYPE 27
816585	305720/2	20	25,00	2000,0	12000	1		4.833	81967	14-02-2011	TYPE 27
909449	298668/1	110	30,00	2500,0	12000	1		7.217	81967	28-01-2011	TYPE 27
909449	298670/1	110	30,00	2500,0	12000	1		7.215	81967	28-01-2011	TYPE 27
909449	300990/1	80	50,00	2000,0	12000	1		9.606	81967	11-02-2011	TYPE 28
909449	300992/1	80	50,00	2000,0	12000	1		9.602	81967	11-02-2011	TYPE 28
909449	301252/1	70	40,00	2500,0	12000	1		9.601	81967	08-02-2011	TYPE 28
909449	301254/1	70	40,00	2500,0	12000	1		9.600	81967	08-02-2011	TYPE 28
909449	301560/1	40	25,00	2500,0	12000	1		6.040	81967	08-02-2011	TYPE 28
909449	305602/1	70	40,00	2500,0	12000	1		9.597	81967	17-02-2011	TYPE 28
909449	305604/1	70	40,00	2500,0	12000	1		9.598	81967	17-02-2011	TYPE 28
909449	305606/1	70	40,00	2500,0	12000	1		9.595	81967	17-02-2011	TYPE 28
909449	305607/1	60	35,00	2000,0	12000	1		6.734	81967	17-02-2011	TYPE 28
909449	305608/1	70	40,00	2500,0	12000	1		9.596	81967	17-02-2011	TYPE 28
909449	305610/1	70	40,00	2500,0	12000	1		9.591	81967	14-02-2011	TYPE 28
909449	305618/1	80	50,00	2000,0	12000	1		9.584	81967	19-02-2011	TYPE 28
909449	305620/1	80	50,00	2000,0	12000	1		9.616	81967	16-02-2011	TYPE 28
909449	305722/1	40	25,00	2500,0	12000	1		6.029	81967	18-02-2011	TYPE 28
909450	301248/1	70	40,00	2500,0	12000	1		9.602	81967	08-02-2011	TYPE 28
909450	301250/1	70	40,00	2500,0	12000	1		9.601	81967	08-02-2011	TYPE 28
909450	301251/1	120	35,00	2500,0	12000	1		8.368	81967	03-02-2011	TYPE 27
909450	301253/1	10	15,00	2500,0	12000	1		3.684	81967	03-02-2011	TYPE 27
909450	301253/2	10	15,00	2500,0	12000	1		3.682	81967	03-02-2011	TYPE 27
909450	301256/2	10	15,00	2500,0	12000	1		3.687	81967	03-02-2011	TYPE 27
909450	301256/1	10	15,00	2500,0	12000	1		3.688	81967	03-02-2011	TYPE 27

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
909450	301257/1	10	15,00	2500,0	12000	1		3.687	81967	03-02-2011	TYPE 27
909450	301257/2	10	15,00	2500,0	12000	1		3.688	81967	03-02-2011	TYPE 27
909450	305612/1	70	40,00	2500,0	12000	1		9.599	81967	17-02-2011	TYPE 28
909450	305614/1	70	40,00	2500,0	12000	1		9.597	81967	17-02-2011	TYPE 28
909450	305616/1	70	40,00	2500,0	12000	1		9.592	81967	17-02-2011	TYPE 28
909450	305619/1	40	25,00	2500,0	12000	1		6.035	81967	23-02-2011	TYPE 28
909450	305621/1	40	25,00	2500,0	12000	1		6.070	81967	18-02-2011	TYPE 28
909450	305622/1	70	40,00	2500,0	12000	1		9.590	81967	14-02-2011	TYPE 28
909450	305623/1	40	25,00	2500,0	12000	1		6.032	81967	18-02-2011	TYPE 28
909450	305625/1	50	30,00	2000,0	12000	1		5.782	81967	17-02-2011	TYPE 28
909450	305627/1	50	30,00	2000,0	12000	1		5.782	81967	17-02-2011	TYPE 28
909450	305723/2	30	20,00	2000,0	12000	1		3.903	81967	17-02-2011	TYPE 28
909450	305723/1	30	20,00	2000,0	12000	1		3.902	81967	17-02-2011	TYPE 28
909450	305725/2	10	15,00	2500,0	12000	1		3.680	81967	16-02-2011	TYPE 27
909450	305725/1	10	15,00	2500,0	12000	1		3.679	81967	10-02-2011	TYPE 27
909450	305726/1	10	15,00	2500,0	12000	1		3.656	81967	14-02-2011	TYPE 27
909450	305726/2	10	15,00	2500,0	12000	1		3.657	81967	14-02-2011	TYPE 27
909450	305727/1	10	15,00	2500,0	12000	1		3.656	81967	27-02-2011	TYPE 27
909450	305727/2	10	15,00	2500,0	12000	1		3.657	81967	17-02-2011	TYPE 27
982322	305161/1	100	90,00	3050,0	6000	1		13.101	81967	18-02-2011	TYPE 28
		Sum				60		448.023			

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.

B14 - Supplementary information

EN 10163 - A3 - Repair-welding not permitted
Dimensional tolerances acc. EN 10029/91
Flatness acc. EN 10029/91 class N
Thicknesstolerance acc. EN 10029/91 class A

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Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=		.150				.015														
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.43	.22	.090	.110	.900
708825	.033	.330	1.650	.009	.0005	.039	.170	.170	.004	.160	.004	.040	.013	.0049	.0002	.37	.15	.044	.057	.504
713008	.031	.186	1.520	.006	.0013	.034	.166	.520	.120	.018	.004	.027	.012	.0041	.0002	.38	.14	.031	.043	.824
714305	.030	.197	1.560	.010	.0007	.035	.174	.530	.122	.017	.004	.029	.012	.0045	.0002	.39	.14	.033	.045	.843
714501	.064	.358	1.530	.005	.0011	.033	.164	.270	.004	.160	.005	.027	.012	.0053	.0002	.38	.17	.032	.044	.598
714502	.065	.359	1.510	.006	.0007	.041	.176	.280	.003	.150	.005	.027	.012	.0049	.0002	.38	.18	.032	.044	.609
815212	.030	.322	1.610	.006	.0005	.039	.166	.170	.006	.150	.005	.040	.013	.0059	.0002	.36	.14	.045	.058	.492
815214	.031	.314	1.590	.008	.0006	.030	.169	.170	.003	.160	.004	.040	.013	.0045	.0002	.35	.14	.044	.057	.502
816585	.029	.330	1.640	.005	.0007	.040	.177	.170	.007	.170	.005	.038	.013	.0053	.0002	.36	.14	.043	.056	.524
909449	.029	.339	1.650	.008	.0005	.036	.178	.180	.003	.170	.004	.038	.012	.0047	.0002	.36	.14	.042	.054	.531
909450	.029	.328	1.580	.006	.0003	.038	.159	.170	.002	.150	.004	.036	.013	.0048	.0002	.35	.14	.040	.053	.481
982322	.037	.180	1.580	.007	.0008	.030	.180	.550	.140	.026	.004	.039	.013	.0052	.0002	.40	.15	.043	.056	.896

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
	>=						460	460	540		17.0		
Set values	<=								700			93.00	93.00
815212	302018	30,0	16.02	F	O	T		542	644	A5	21.4		84.15
909450	301256	30,0	16.03	F	O	T		510	608	A5	21.5		83.93
	305727	30,0	16.03	F	O	T		491	598	A5	27.7		82.03
	>=						420	420	530		17.0		
Set values	<=								690			90.00	90.00
708825	305721	30,0	25.70	F	O	T	584	583	655	A5	19.8	89.16	89.01
815214	304563	30,0	25.73	F	O	T		548	614	A5	23.5		89.36
816585	305719	30,0	25.07	F	O	T		571	635	A5	20.4		89.88
909449	301560	30,0	25.44	F	O	T		551	617	A5	19.8		89.26
909450	305619	30,0	25.42	F	O	T	515	511	575	A5	28.4	89.56	88.87
	305623	30,0	25.46	F	O	T	514	510	581	A5	27.7	88.53	87.81
	305723	30,0	20.90	F	O	T	526	525	614	A5	23.7	85.67	85.50
	>=						420	420	520		17.0		
Set values	<=								680			90.00	90.00
909449	298670	30,0	30.97	F	O	T		529	590	A5	24.6		89.58
	301254	30,0	40.63	F	O	T		507	599	A5	23.0		84.76
	305602	30,0	40.65	F	O	T		499	584	A5	26.0		85.47
	305607	30,0	35.61	F	O	T		497	589	A5	28.0		84.46
	305608	30,0	40.62	F	O	T		511	591	A5	26.8		86.51
909450	301250	30,0	40.61	F	O	T		499	587	A5	23.4		84.95
	301251	30,0	35.47	F	O	T		501	598	A5	25.3		83.79
	305616	30,0	40.53	F	O	T		499	582	A5	28.6		85.80
	305627	30,0	30.64	F	O	T		516	575	A5	30.4		89.69
	>=						415	415	515		17.0		
Set values	<=								675			90.00	90.00
909449	300990	ø	10.01	F	V	T		471	564	A5	28.4		83.48
	>=						405	405	505		17.0		
Set values	<=								665			90.00	90.00
714305	297327	ø	10.02	F	V	T		426	549	A5	29.3		77.72
714502	304650	ø	10.02	F	V	T	443	436	537	A5	31.9	82.56	81.24
	>=						400	400	500		17.0		
Set values	<=								660			90.00	90.00

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Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
Set values >=							400	400	500		17.0		
Set values <=									660			90.00	90.00
713008	305691	Ø	10.00	F	V	T		454	547	A5	27.3		83.04
714501	305164	Ø	10.02	F	V	T		415	555	A5	30.2		74.78
	305165	Ø	10.03	F	V	T		403	551	A5	30.4		73.14
	305166	Ø	10.01	F	V	T		428	555	A5	26.7		77.14
714502	305167	Ø	10.03	F	V	T		414	558	A5	30.3		74.13
	305168	Ø	10.02	F	V	T		425	562	A5	30.8		75.73
982322	305161	Ø	9.99	F	V	T		457	561	A5	28.2		81.39

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼
C02;Dir:
T: transverse
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
	>=					-40	42	42	42	60
Set values	<=									
708825	305721	CV 10x10	F	O	L	-40	339	353	364	352
713008	308654	CV 10x10	F	O	L	-40	358	371	342	357
	308654	CV 10x10	F	K	L	-40	352	344	338	345
714305	314984	CV 10x10	F	O	L	-40	337	341	342	340
	314984	CV 10x10	F	K	L	-40	345	317	356	339
714501	305164	CV 10x10	F	O	L	-40	272	262	268	267
	305165	CV 10x10	F	O	L	-40	265	264	324	284
	305166	CV 10x10	F	O	L	-40	288	278	261	276
	305164	CV 10x10	F	K	L	-40	152	195	155	167
	305165	CV 10x10	F	K	L	-40	131	130	107	123
	305166	CV 10x10	F	K	L	-40	76	62	64	67
714502	304651	CV 10x10	F	O	L	-40	301	275	311	296
	305167	CV 10x10	F	O	L	-40	308	284	277	290
	305168	CV 10x10	F	O	L	-40	316	246	329	297
	304651	CV 10x10	F	K	L	-40	137	129	172	146
	305167	CV 10x10	F	K	L	-40	60	169	75	102
	305168	CV 10x10	F	K	L	-40	124	120	228	158
815212	302018	CV 10x10	F	O	L	-40	386	393	375	384
815214	304563	CV 10x10	F	O	L	-40	356	364	350	356
816585	305719	CV 10x10	F	O	L	-40	339	314	333	329
909449	298670	CV 10x10	F	O	L	-40	336	358	340	345
	300990	CV 10x10	F	O	L	-40	390	380	393	387
	301254	CV 10x10	F	O	L	-40	397	395	379	390
	301560	CV 10x10	F	O	L	-40	363	347	374	361
	305602	CV 10x10	F	O	L	-40	392	384	367	381
	305607	CV 10x10	F	O	L	-40	377	403	386	389
	305608	CV 10x10	F	O	L	-40	386	383	398	389
	300990	CV 10x10	F	K	L	-40	389	386	400	392
909450	301250	CV 10x10	F	O	L	-40	389	385	381	385
	301251	CV 10x10	F	O	L	-40	400	398	396	398
	301256	CV 10x10	F	O	L	-40	408	415	421	415
	305616	CV 10x10	F	O	L	-40	406	392	398	399
	305623	CV 10x10	F	O	L	-40	415	417	410	414
	305627	CV 10x10	F	O	L	-40	383	391	397	390

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
909450	305723	CV 10x10	F	O	L	-40	411	416	416	414
	305727	CV 10x10	F	O	L	-40	405	412	393	403
982322	305161	CV 10x10	F	O	L	-40	308	338	342	329
	305161	CV 10x10	F	K	L	-40	283	283	136	234

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½
O: surface
C02;Dir:
L: longitudinal
C42;SV: single value
C43;AV: average value

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Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						424	424	424	25	25	25	35
Set values <=												
909449	301560	Ø	10.03	F	S	509	509	510	71	74	71	72
909450	301250	Ø	10.03	F	S	556	556	555	84	86	84	85
>=						416	416	416	25	25	25	35
Set values <=												
909449	301560	Ø	10.03	F	S	509	509	510	71	74	71	72
909450	301250	Ø	10.03	F	S	556	556	555	84	86	84	85
>=						412	412	412	25	25	25	35
Set values <=												
909449	301560	Ø	10.03	F	S	509	509	510	71	74	71	72
>=						404	404	404	25	25	25	35
Set values <=												
714305	297327	Ø	10.02	F	S	548	548	547	81	81	82	81
714502	304651	Ø	10.04	F	S	562	557	560	44	51	42	46
>=						400	400	400	25	25	25	35
Set values <=												
713008	304522	Ø	10.02	F	S	534	535	535	81	83	82	82
714501	305166	Ø	10.00	F	S	563	562	566	42	32	44	39
714502	305168	Ø	10.02	F	S	571	579	561	41	47	30	39
982322	305161	Ø	10.00	F	S	560	551	559	36	30	43	36

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

voestalpine

Z03
Stamp of the inspection representative

LR

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Germanischer Lloyd Industrial Services
- 8. APR. 2011

Lloyd's Register EMEA
Vienna Office
Initials: KH
05 APR 2011

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis)

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
	>=		.150				.015														
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100		.43	.22	.090	.110	.900
708825	305721	.039	.341	1.620	.009	.0006	.030	.178	.170	.003	.160	.004	.040	.012	.0048	.0003	.37	.15	.044	.056	.511
713008	308654	.033	.181	1.510	.007	.0014	.032	.160	.520	.120	.017	.004	.026	.012	.0040	.0002	.38	.14	.030	.042	.817
714305	314984	.034	.198	1.590	.010	.0007	.035	.176	.540	.125	.017	.004	.029	.012	.0046	.0002	.40	.15	.033	.045	.858
714501	305164	.059	.360	1.550	.006	.0011	.032	.163	.280	.004	.160	.004	.027	.012	.0052	.0002	.38	.17	.031	.043	.607
	305165	.059	.366	1.570	.006	.0011	.033	.166	.280	.004	.170	.004	.027	.013	.0056	.0002	.39	.17	.031	.044	.620
	305166	.055	.353	1.530	.005	.0010	.032	.158	.270	.003	.160	.004	.026	.012	.0056	.0002	.37	.17	.030	.042	.591
714502	304520	.064	.358	1.500	.006	.0009	.037	.176	.290	.003	.160	.005	.028	.011	.0053	.0002	.38	.17	.033	.044	.629
	305167	.062	.369	1.560	.007	.0009	.037	.180	.280	.003	.160	.005	.027	.012	.0050	.0002	.39	.18	.032	.044	.623
	305168	.059	.359	1.530	.006	.0006	.037	.177	.280	.003	.160	.005	.026	.012	.0052	.0002	.38	.17	.031	.043	.620
815212	302018	.030	.324	1.620	.006	.0005	.037	.161	.170	.006	.160	.005	.040	.013	.0052	.0002	.36	.14	.045	.058	.497
815214	265338	.035	.332	1.630	.008	.0008	.032	.175	.170	.003	.160	.005	.040	.013	.0048	.0002	.37	.15	.045	.058	.508
816585	305719	.033	.339	1.630	.007	.0011	.033	.180	.170	.007	.170	.005	.037	.012	.0060	.0002	.37	.15	.042	.054	.527
909449	298670	.028	.332	1.620	.008	.0006	.033	.175	.180	.002	.170	.003	.037	.012	.0046	.0002	.36	.14	.040	.052	.527
	300992	.030	.333	1.630	.008	.0003	.033	.173	.180	.002	.160	.004	.038	.012	.0044	.0002	.36	.14	.042	.054	.515
	301252	.026	.329	1.620	.008	.0003	.034	.173	.180	.002	.160	.004	.037	.012	.0048	.0002	.35	.14	.041	.053	.515
	305604	.028	.338	1.650	.008	.0003	.035	.173	.180	.003	.170	.003	.038	.012	.0046	.0002	.36	.14	.041	.053	.526
	305620	.029	.337	1.630	.008	.0005	.031	.178	.180	.002	.160	.003	.038	.011	.0049	.0002	.36	.14	.041	.052	.520
909450	301251	.025	.333	1.600	.006	.0003	.039	.157	.170	.002	.150	.004	.036	.013	.0046	.0002	.35	.14	.040	.053	.479
	301256	.024	.333	1.600	.007	.0003	.039	.157	.170	.002	.150	.004	.036	.013	.0051	.0002	.34	.13	.040	.053	.479
	305612	.028	.338	1.640	.007	.0004	.036	.171	.180	.002	.160	.004	.038	.012	.0045	.0002	.36	.14	.042	.054	.513
	305623	.027	.343	1.620	.007	.0003	.039	.157	.170	.002	.160	.004	.037	.013	.0044	.0002	.35	.14	.041	.054	.489
	305723	.030	.340	1.620	.007	.0004	.039	.157	.170	.002	.150	.004	.036	.013	.0042	.0002	.35	.14	.040	.053	.479
982322	305161	.032	.177	1.580	.008	.0004	.029	.177	.520	.144	.026	.005	.040	.012	.0040	.0002	.40	.15	.045	.057	.867

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the delivery specified above corresponds to the order (and standard).

Z03
Stamp of the inspection representative

LR

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- 8. APR. 2011

Lloyd's Register EMEA
Vienna Office
Initials: KH
05 APR 2011

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

Remarks

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

voestalpine

Z03
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8. APR. 2011

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Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

VNA1100040-1 K

Z02 Date 28-03-2011

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0326183/US	A08 Order-No.:	0535665	A07 OrderDat.	26-10-2010	Date of dispatch	22-03-2011 6D
A06 Customer	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF	B01 Product	Plate				
		B02 Material	S460G2+M Z35*	B03 Standard	EN 10225 : 2009		
A07 OrderNo.	1335-10						
A06 Consignee	Project Materials GmbH Hansallee 201 D-40549 DÜSSELDORF						

A10 - Supplementary information

*Z35 tests for ITEM NO.: 40, 50, 60, 70, 80, 90, 100.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
708825	305721/2	20	25,00	2000,0	12000	1		4.834	81967	16-02-2011	TYPE 27
708825	305721/1	20	25,00	2000,0	12000	1		4.834	81967	16-02-2011	TYPE 27
713008	308654/1	100	90,00	3050,0	6000	1		13.144	81967	21-02-2011	TYPE 28
714305	314984/1	90	80,00	2500,0	6000	1		9.614	81967	08-03-2011	TYPE 28
714501	305163/1	100	90,00	3050,0	6000	1		13.101	81967	17-02-2011	TYPE 28
714501	305164/1	100	90,00	3050,0	6000	1		13.116	81967	19-02-2011	TYPE 28
714501	305165/1	100	90,00	3050,0	6000	1		13.123	81967	21-02-2011	TYPE 28
714501	305166/1	100	90,00	3050,0	6000	1		13.114	81967	17-02-2011	TYPE 28
714502	305167/1	100	90,00	3050,0	6000	1		13.123	81967	02-03-2011	TYPE 28
714502	305168/1	100	90,00	3050,0	6000	1		13.166	81967	21-02-2011	TYPE 28
714502	305693/1	90	80,00	2500,0	6000	1		9.553	81967	16-02-2011	TYPE 28
815212	302018/1	10	15,00	2500,0	12000	1		3.682	81967	03-02-2011	TYPE 27
815214	304563/1	20	25,00	2000,0	12000	1		4.837	81967	11-02-2011	TYPE 27
816585	305719/2	20	25,00	2000,0	12000	1		4.830	81967	16-02-2011	TYPE 27
816585	305719/1	20	25,00	2000,0	12000	1		4.807	81967	17-02-2011	TYPE 27
816585	305720/1	20	25,00	2000,0	12000	1		4.834	81967	14-02-2011	TYPE 27

A04
Symbol of the manufacturer's work

voestalpine

Z03
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- 8. APR. 2011

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05 APR 2011

Z02
Inspection representative voestalpine Grobblech (Level 3)
Bindreiter

Abnahme

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
816585	305720/2	20	25,00	2000,0	12000	1		4.833	81967	14-02-2011	TYPE 27
909449	298668/1	110	30,00	2500,0	12000	1		7.217	81967	28-01-2011	TYPE 27
909449	298670/1	110	30,00	2500,0	12000	1		7.215	81967	28-01-2011	TYPE 27
909449	300990/1	80	50,00	2000,0	12000	1		9.606	81967	11-02-2011	TYPE 28
909449	300992/1	80	50,00	2000,0	12000	1		9.602	81967	11-02-2011	TYPE 28
909449	301252/1	70	40,00	2500,0	12000	1		9.601	81967	08-02-2011	TYPE 28
909449	301254/1	70	40,00	2500,0	12000	1		9.600	81967	08-02-2011	TYPE 28
909449	301560/1	40	25,00	2500,0	12000	1		6.040	81967	08-02-2011	TYPE 28
909449	305602/1	70	40,00	2500,0	12000	1		9.597	81967	17-02-2011	TYPE 28
909449	305604/1	70	40,00	2500,0	12000	1		9.598	81967	17-02-2011	TYPE 28
909449	305606/1	70	40,00	2500,0	12000	1		9.595	81967	17-02-2011	TYPE 28
909449	305607/1	60	35,00	2000,0	12000	1		6.734	81967	17-02-2011	TYPE 28
909449	305608/1	70	40,00	2500,0	12000	1		9.596	81967	17-02-2011	TYPE 28
909449	305610/1	70	40,00	2500,0	12000	1		9.591	81967	14-02-2011	TYPE 28
909449	305618/1	80	50,00	2000,0	12000	1		9.584	81967	19-02-2011	TYPE 28
909449	305620/1	80	50,00	2000,0	12000	1		9.616	81967	16-02-2011	TYPE 28
909449	305722/1	40	25,00	2500,0	12000	1		6.029	81967	18-02-2011	TYPE 28
909450	301248/1	70	40,00	2500,0	12000	1		9.602	81967	08-02-2011	TYPE 28
909450	301250/1	70	40,00	2500,0	12000	1		9.601	81967	08-02-2011	TYPE 28
909450	301251/1	120	35,00	2500,0	12000	1		8.368	81967	03-02-2011	TYPE 27
909450	301253/2	10	15,00	2500,0	12000	1		3.682	81967	03-02-2011	TYPE 27
909450	301253/1	10	15,00	2500,0	12000	1		3.684	81967	03-02-2011	TYPE 27
909450	301256/1	10	15,00	2500,0	12000	1		3.688	81967	03-02-2011	TYPE 27
909450	301256/2	10	15,00	2500,0	12000	1		3.687	81967	03-02-2011	TYPE 27
909450	301257/1	10	15,00	2500,0	12000	1		3.687	81967	03-02-2011	TYPE 27
909450	301257/2	10	15,00	2500,0	12000	1		3.688	81967	03-02-2011	TYPE 27
909450	305612/1	70	40,00	2500,0	12000	1		9.599	81967	17-02-2011	TYPE 28
909450	305614/1	70	40,00	2500,0	12000	1		9.597	81967	17-02-2011	TYPE 28
909450	305616/1	70	40,00	2500,0	12000	1		9.592	81967	17-02-2011	TYPE 28
909450	305619/1	40	25,00	2500,0	12000	1		6.035	81967	23-02-2011	TYPE 28
909450	305621/1	40	25,00	2500,0	12000	1		6.070	81967	18-02-2011	TYPE 28
909450	305622/1	70	40,00	2500,0	12000	1		9.590	81967	14-02-2011	TYPE 28
909450	305623/1	40	25,00	2500,0	12000	1		6.032	81967	18-02-2011	TYPE 28
909450	305625/1	50	30,00	2000,0	12000	1		5.782	81967	17-02-2011	TYPE 28
909450	305627/1	50	30,00	2000,0	12000	1		5.782	81967	17-02-2011	TYPE 28
909450	305723/2	30	20,00	2000,0	12000	1		3.903	81967	17-02-2011	TYPE 28
909450	305723/1	30	20,00	2000,0	12000	1		3.902	81967	17-02-2011	TYPE 28

Z03 Stamp of the inspection representative

LR

Z02 Inspection representative voestalpine Grobblech (Level 3) Bindreiter

voestalpine

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Germanischer Lloyd Industrial Services
0. APR. 2011
J. Bruck

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05 APR 2011

Abnahme

voestalpine ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
909450	305725/2	10	15,00	2500,0	12000	1		3.680	81967	16-02-2011	TYPE 27
909450	305725/1	10	15,00	2500,0	12000	1		3.679	81967	10-02-2011	TYPE 27
909450	305726/2	10	15,00	2500,0	12000	1		3.657	81967	14-02-2011	TYPE 27
909450	305726/1	10	15,00	2500,0	12000	1		3.656	81967	14-02-2011	TYPE 27
909450	305727/2	10	15,00	2500,0	12000	1		3.657	81967	17-02-2011	TYPE 27
909450	305727/1	10	15,00	2500,0	12000	1		3.656	81967	27-02-2011	TYPE 27
982322	305161/1	100	90,00	3050,0	6000	1		13.101	81967	18-02-2011	TYPE 28
		Sum				60		448.023			

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.

Remarks

SPECIFICATION
Ultrasonic examination acc. to EN 10160, class S1/plate body, class E2/edge zones.

TEST EQUIPMENT
Apparatus: mechanized ultrasonic "in-Line testing system" (Manufacturer: NDT-Systems & Services),
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH), Sonatest D20 no.: 57;
Probe: 3STSE 18.3/8 PB5, SEZ5R10RS-3, SE3 18.3/10 5A, (5MHz) (in-line AUT), S140 (4MHz) 3T/1R (off-line AUT), SEB4E, SEB4E0°, (4MHz) (MUT);
watergapcoupling

RESULT
The plates are within the specification.

NOTE
Operator:
Beigans A., Konig M., Haas H., Steininger R., Hübler R., Krahl Ch., Steubelmüller E., Rockenschaub J., Neumüller H; (AUT) level 1, acc. to ÖNORM-EN 473.
Roschel Th; (AUT) level 2, acc. to ÖNORM-EN 473.
Kaufmann N., Aumair E; (MUT) level 2, acc. to ÖNORM-EN 473.

Z03 Stamp of the inspection representative

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Z02 Inspection representative voestalpine Grobblech (Level 3) Bindreiter

voestalpine

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05 APR 2011

Abnahme

voestalpine ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
SPECIAL PIPING MATERIALS LTD	1123000246		Q012301904

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MELLITAH OIL & GAS B.V – BOURI GAS UTILISATION PROJECT
VENDORS FRONT SHEET (FOR A4 DOCUMENTS ONLY)

DOCUMENT TITLE	MATERIAL TEST CERTIFICATES (PLATES)

TOTAL No. OF PAGES (INCLUDING FRONT SHEETS)	34
VENDORS ORDER No.	1335-10

VENDORS OWN DOCUMENT No.	VENDORS REVISION	DATE	VENDORS APPROVAL NAME AND SIGNATURE
1335_MTC_1_0	0	13.08.10	B. Scholz

MUSTANG

MELLITAH OIL & GAS B.V – BOURI GAS UTILISATION PROJECT

REVIEW DOES NOT CONSTITUTE ACCEPTANCE OF DESIGN DETAILS, CALCULATIONS, TEST METHODS OR MATERIALS DEVELOPED OR SELECTED BY VENDOR, NOR DOES IT RELIEVE VENDOR FROM FULL COMPLIANCE WITH CONTRACTUAL OR OTHER OBLIGATIONS.

- ☐ 1 Accepted (Manufacturer may proceed).
- ☐ 2 (code not used)
- ☐ 3 Proceed – with the exception of noted comments. Address comments and resubmit
- ☐ 4 Manufacturer may not proceed. Revise and resubmit.
- ☐ 5 (code not used)
- ☐ 6 For Information Only
- ☐ 7 Void / Cancelled

NAME: ..... DATE: .....

SIGNATURE: .....

VENDOR NAME:- **PROJECT MATERIALS GMBH**

EQUIPMENT DESCRIPTION :- **PLATES**

TAG NOS :-

MODEL TYPE NOS :-

1133638-PO No.	SDRS No.	Sequence No.	Rev.
1133638-100.0	C04	001	0

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Certificate Number: **VNA 1000097 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **0535001**

Date: **02-08-2010**

Order Status: **incomplete**

Inspection Dates
First: **28-06-2010**

final: **25-07-2010**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Project Materials GmbH**
Hansallee 201
D-40549 DÜSSELDORF

Order No.: **1335-10**

Description:

100 piece(s) of steel plate(s) **620824** kgs, as per attached inspection Certificate no.: **A0322227**

Specification

S460G2+M Z35* EN 10225 : 2009

Heat treatment/Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☑
review manufacturer's declared analysis: yes ☑
witness / verify ultrasonic examination: yes ☑ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☑
witness /verify corrosion testing: yes ☐ n/a ☑
random visual and dimensional control and check of hard stamping: yes ☑

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LR

Lloyd's Register EMEA
Vienna Office
Lloyd's Register

Kurt Huber A. ALTENDORFER

Surveyor to Lloyd's Register EMEA

05 AUG 2010

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voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.2

VNA1000097-1

Z02 Date 02-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322227	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010

Date of dispatch 28-07-2010 6D

A06 Customer: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

A07 OrderNo.: 1335-10

A06 Consignee: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
BOURI GRM GAS
*Z35 for ITEM NO.: 50, 60, 70, 80, 90.

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED. FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. SPEC. 3417-000-S-SP-MEL-90002 REV.D01. SPEC. 08832.STR.MME-SPC REV.8.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
707210	226882/1	80	40,00	2450,0	12000	1		9.397	74750	28-06-2010	TYPE 28
707210	226889/1	80	40,00	2450,0	12000	1		9.400	74750	28-06-2010	TYPE 28
707210	226898/1	110	35,00	2500,0	10000	1		7.009	74750	01-07-2010	TYPE 27
707210	226906/1	30	25,00	2600,0	12000	1		6.271	74750	28-06-2010	TYPE 27
707210	226908/1	30	25,00	2600,0	12000	1		6.270	74750	05-07-2010	TYPE 27
707210	226926/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
707210	226926/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
707210	227278/1	20	20,00	2500,0	12000	1		4.866	74750	28-06-2010	TYPE 27
707210	227279/1	20	20,00	2500,0	12000	1		4.867	74750	28-06-2010	TYPE 27
707210	230860/1	90	50,00	2200,0	12000	1		10.569	74750	19-07-2010	TYPE 28
707210	230861/1	90	50,00	2200,0	12000	1		10.560	74750	19-07-2010	TYPE 28
707210	230862/1	90	50,00	2200,0	12000	1		10.560	74750	19-07-2010	TYPE 28
812009	226891/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226893/1	80	40,00	2450,0	12000	1		9.394	74750	30-06-2010	TYPE 28
812009	226895/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28

A04
Symbol of the manufacturer's work

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812009	226900/1	110	35,00	2500,0	9605	1		6.702	74750	25-07-2010	TYPE 27
812009	226901/1	80	40,00	2450,0	12000	1		9.399	74750	06-07-2010	TYPE 28
812009	226902/1	110	35,00	2500,0	10000	1		7.007	74750	29-06-2010	TYPE 27
812009	226903/1	80	40,00	2450,0	12000	1		9.395	74750	30-06-2010	TYPE 28
812009	226904/1	110	35,00	2500,0	10000	1		7.038	74750	29-06-2010	TYPE 27
812009	226905/1	80	40,00	2450,0	12000	1		9.402	74750	30-06-2010	TYPE 28
812009	226907/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28
812009	226909/1	80	40,00	2450,0	12000	1		9.396	74750	30-06-2010	TYPE 28
812009	226911/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226913/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28
812009	226915/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226917/1	80	40,00	2450,0	12000	1		9.400	74750	30-06-2010	TYPE 28
812009	226919/1	80	40,00	2450,0	12000	1		9.396	74750	30-06-2010	TYPE 28
812009	226921/1	80	40,00	2450,0	12000	1		9.428	74750	01-07-2010	TYPE 28
812010	226888/1	110	35,00	2500,0	10000	1		7.009	74750	28-06-2010	TYPE 27
812010	226890/1	110	35,00	2500,0	10000	1		7.008	74750	28-06-2010	TYPE 27
812010	226892/1	110	35,00	2500,0	10000	1		7.011	74750	28-06-2010	TYPE 27
812010	226894/1	110	35,00	2500,0	10000	1		7.011	74750	28-06-2010	TYPE 27
812010	226896/1	110	35,00	2500,0	10000	1		7.005	74750	28-06-2010	TYPE 27
812011	226897/1	80	40,00	2450,0	12000	1		9.403	74750	30-06-2010	TYPE 28
812014	226910/1	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226910/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226912/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226912/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226914/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226914/2	10	15,00	2600,0	12000	1		3.827	74750	10-07-2010	TYPE 27
812014	226916/1	10	15,00	2600,0	12000	1		3.845	74750	09-07-2010	TYPE 27
812014	226916/2	10	15,00	2600,0	12000	1		3.839	74750	09-07-2010	TYPE 27
812014	226918/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226918/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226920/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226920/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226922/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226922/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226924/1	10	15,00	2600,0	12000	1		3.828	74750	28-06-2010	TYPE 27
812014	226924/2	10	15,00	2600,0	12000	1		3.825	74750	28-06-2010	TYPE 27
812014	230865/1	90	50,00	2200,0	12000	1		10.536	74750	19-07-2010	TYPE 28

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812034	230943/1	110	35,00	2500,0	10000	1		7.009	74750	07-07-2010	TYPE 27
812034	233486/1	60	30,00	2450,0	12000	1		7.074	74750	19-07-2010	TYPE 28
812034	233488/1	60	30,00	2450,0	12000	1		7.076	74750	19-07-2010	TYPE 28
812034	233490/1	60	30,00	2450,0	12000	1		7.076	74750	22-07-2010	TYPE 28
812034	233492/1	60	30,00	2450,0	12000	1		7.079	74750	22-07-2010	TYPE 28
812034	233494/1	60	30,00	2450,0	12000	1		7.074	74750	22-07-2010	TYPE 28
812034	233495/1	30	25,00	2600,0	12000	1		6.272	74750	19-07-2010	TYPE 27
812034	233496/1	60	30,00	2450,0	12000	1		7.076	74750	22-07-2010	TYPE 28
812034	233497/1	30	25,00	2600,0	12000	1		6.272	74750	19-07-2010	TYPE 27
812034	233498/1	60	30,00	2450,0	12000	1		7.078	74750	22-07-2010	TYPE 28
812034	233499/1	30	25,00	2600,0	12000	1		6.271	74750	19-07-2010	TYPE 27
812034	233501/1	30	25,00	2600,0	12000	1		6.272	74750	22-07-2010	TYPE 27
812034	233503/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
812034	233504/2	10	15,00	2600,0	12000	1		3.827	74750	22-07-2010	TYPE 27
812034	233504/1	10	15,00	2600,0	12000	1		3.829	74750	22-07-2010	TYPE 27
812034	233505/1	30	25,00	2600,0	12000	1		6.271	74750	22-07-2010	TYPE 27
812034	233506/1	10	15,00	2600,0	12000	1		3.828	74750	22-07-2010	TYPE 27
812034	233506/2	10	15,00	2600,0	12000	1		3.827	74750	22-07-2010	TYPE 27
812034	233507/1	30	25,00	2600,0	12000	1		6.272	74750	22-07-2010	TYPE 27
812034	233509/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
812036	230876/1	20	20,00	2500,0	12000	1		4.848	74750	09-07-2010	TYPE 27
812036	230877/1	20	20,00	2500,0	12000	1		4.848	74750	09-07-2010	TYPE 27
812036	230903/1	40	20,00	2550,0	12000	1		4.937	74750	05-07-2010	TYPE 28
812036	230904/1	40	20,00	2550,0	12000	1		4.939	74750	07-07-2010	TYPE 28
812036	230905/1	40	20,00	2550,0	12000	1		4.941	74750	06-07-2010	TYPE 28
812036	230906/1	40	20,00	2550,0	12000	1		4.942	74750	07-07-2010	TYPE 28
812036	230907/1	40	20,00	2550,0	12000	1		4.965	74750	07-07-2010	TYPE 28
812036	230908/1	40	20,00	2550,0	12000	1		4.966	74750	06-07-2010	TYPE 28
812036	233487/1	70	35,00	2000,0	6000	1		3.367	74750	19-07-2010	TYPE 28
812036	233489/1	100	30,00	2000,0	12000	1		5.780	74750	19-07-2010	TYPE 27
812036	233491/1	100	30,00	2000,0	12000	1		5.784	74750	19-07-2010	TYPE 27
812036	233493/1	120	30,00	2000,0	12000	1		5.782	74750	19-07-2010	TYPE 27
903313	230909/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230910/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230911/1	40	20,00	2550,0	12000	1		4.940	74750	07-07-2010	TYPE 28
903313	230912/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230913/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
903313	230914/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230915/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230916/1	40	20,00	2550,0	12000	1		4.965	74750	05-07-2010	TYPE 28
903313	230917/1	40	20,00	2550,0	12000	1		4.964	74750	05-07-2010	TYPE 28
903313	230918/1	40	20,00	2550,0	12000	1		4.963	74750	05-07-2010	TYPE 28
903313	230919/1	40	20,00	2550,0	12000	1		4.890	74750	07-07-2010	TYPE 28
903313	230920/1	40	20,00	2550,0	12000	1		4.892	74750	07-07-2010	TYPE 28
903313	233508/1	50	25,00	2350,0	12000	1		5.673	74750	22-07-2010	TYPE 28
903313	233510/1	50	25,00	2350,0	12000	1		5.674	74750	22-07-2010	TYPE 28
903313	233511/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
903313	233512/1	50	25,00	2350,0	12000	1		5.676	74750	22-07-2010	TYPE 28
	Sum					100		620.824			

B14 - Supplementary information

length-deviation for plate(s) 226900/1: Customer accepted the deviation.
C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.
ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

B14 - Supplementary information

EN 10163 - A3 - Repair-welding not permitted
Dimensional tolerances acc. EN 10029/91
Flatness acc. EN 10029/91 class N
Thicknesstolerance acc. EN 10029/91 class A

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Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=		.150				.015														
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.43	.22	.090	.110	.900
707210	.036	.330	1.640	.007	.0007	.040	.160	.170	.010	.170	.004	.038	.014	.0051	.0002	.37	.15	.042	.056	.510
812009	.029	.330	1.630	.007	.0007	.042	.180	.170	.007	.160	.004	.040	.014	.0046	.0002	.36	.14	.044	.058	.517
812010	.027	.350	1.640	.006	.0003	.040	.170	.180	.005	.190	.003	.036	.012	.0047	.0002	.36	.14	.039	.051	.545
812011	.028	.330	1.590	.006	.0011	.036	.180	.180	.005	.160	.003	.039	.013	.0049	.0002	.35	.14	.042	.055	.525
812014	.028	.310	1.590	.007	.0010	.031	.170	.170	.003	.160	.004	.035	.014	.0049	.0002	.35	.14	.039	.053	.503
812034	.029	.330	1.590	.006	.0009	.034	.170	.170	.003	.160	.003	.040	.013	.0044	.0002	.35	.14	.043	.056	.503
812036	.032	.320	1.620	.006	.0009	.035	.170	.170	.005	.160	.004	.039	.013	.0050	.0002	.36	.14	.043	.056	.505
903313	.032	.330	1.600	.006	.0006	.038	.180	.170	.003	.160	.003	.040	.012	.0050	.0002	.36	.14	.043	.055	.513

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosThickn	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
	>=						460	460	540		17.0		
Set values	<=								700			93.00	93.00
707210	226926	30,0	16.16	F	O	T		556	611	A5	19.6		90.99
812014	226916	30,0	15.98	F	O	T		531	587	A5	20.7		90.48
	226924	30,0	16.22	F	O	T		534	583	A5	23.7		91.63
812034	233504	30,0	15.99	F	O	T	531	525	594	A5	28.8	89.48	88.37
	>=						420	420	530		17.0		
Set values	<=								690			90.00	90.00
707210	226908	30,0	25.45	F	O	T		561	624	A5	23.2		89.88
	227278	30,0	20.62	F	O	T		547	609	A5	22.9		89.84
812034	233499	30,0	25.70	F	O	T		531	591	A5	21.7		89.84
	233509	30,0	25.65	F	O	T	522	508	585	A5	29.3	89.25	86.92
812036	226247	30,0	20.65	F	O	T		549	611	A5	21.8		89.84
	230876	30,0	20.70	F	O	T		551	613	A5	20.7		89.81
	230877	30,0	20.84	F	O	T		530	595	A5	24.0		89.08
	230908	30,0	20.76	F	O	T		573	639	A5	21.8		89.64
903313	226249	30,0	20.54	F	O	T		540	604	A5	21.8		89.43
	230920	30,0	20.51	F	O	T		542	604	A5	20.7		89.81
	233512	30,0	26.13	F	O	T	561	553	627	A5	21.0	89.49	88.15
	>=						420	420	520		17.0		
Set values	<=								680			90.00	90.00
707210	217674	30,0	41.58	F	O	T		558	620	A5	21.8		89.91
	226882	30,0	40.83	F	O	T		569	638	A5	21.2		89.29
	226898	30,0	35.59	F	O	T		578	649	A5	24.9		88.98
812009	226899	30,0	40.59	F	O	T		534	606	A5	23.7		88.11
	226901	30,0	40.68	F	O	T		537	607	A5	23.1		88.46
	226902	30,0	35.58	F	O	T		560	628	A5	22.0		89.16
	226905	30,0	40.58	F	O	T		540	610	A5	23.4		88.56
	226919	30,0	41.27	F	O	T		487	586	A5	25.8		83.11
	226921	30,0	40.89	F	O	T		487	588	A5	24.5		82.77
812010	226896	30,0	35.63	F	O	T		556	625	A5	22.4		88.95
812011	226897	30,0	40.73	F	O	T		533	605	A5	23.1		88.10
812034	230943	30,0	36.05	F	O	T		511	613	A5	22.0		83.42
	232210	30,0	30.10	F	O	T		525	586	A5	25.7		89.61
	233492	30,0	30.79	F	O	T		523	585	A5	24.9		89.29

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Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosThickn	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
	>=						420	420	520		17.0		
Set values	<=								680			90.00	90.00
812036	226289	30,0	39.65	F	O	T		520	598	A5	23.7		86.98
	233493	30,0	30.61	F	O	T		531	594	A5	26.6		89.29
	>=						415	415	515		17.0		
Set values	<=								675			90.00	90.00
707210	230860	Ø	10.01	F	V	T		521	600	A5	29.4		86.93
812014	230865	Ø	10.00	F	V	T		452	547	A5	31.4		82.77

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosThickn:
O: surface
V: ¼
C02;Dir:
T: transverse
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosThickn	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
Set values >=						-40	42	42	42	60	
707210	226889	CV 10x10	F	O	L	-40	373	374	356	368	
	226898	CV 10x10	F	O	L	-40	372	351	361	361	
	226908	CV 10x10	F	O	L	-40	339	343	336	339	
	226926	CV 10x10	F	O	L	-40	355	361	366	360	
	227278	CV 10x10	F	O	L	-40	361	362	375	366	
	230860	CV 10x10	F	O	L	-40	337	348	339	341	
	230860	CV 10x10	F	K	L	-40	354	363	313	343	
812009	226899	CV 10x10	F	O	L	-40	338	354	361	351	
	226901	CV 10x10	F	O	L	-40	343	350	347	347	
	226902	CV 10x10	F	O	L	-40	331	336	339	335	
	226905	CV 10x10	F	O	L	-40	358	339	345	347	
	226919	CV 10x10	F	O	L	-40	336	368	354	353	
	226921	CV 10x10	F	O	L	-40	328	353	343	341	
812010	226896	CV 10x10	F	O	L	-40	329	346	342	339	
812011	226897	CV 10x10	F	O	L	-40	327	347	337	337	

Z03
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05 AUG 2010

Z02
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Test results: C40-C49 Impact Test acc. DIN / EN

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43	
Heat No.	Plate No	shape	loc.	PosThickn	Dir	temp	SV	SV	SV	AV	samp.cond.
						°C	J	J	J	J	
	>=					-40	42	42	42	60	
Set values	<=										
812014	226916	CV 10x10	F	O	L	-40	336	341	332	336	
	226924	CV 10x10	F	O	L	-40	349	342	344	345	
	230865	CV 10x10	F	O	L	-40	341	346	329	339	
	230865	CV 10x10	F	K	L	-40	350	355	363	356	
812034	230943	CV 10x10	F	O	L	-40	306	315	300	307	
	233488	CV 10x10	F	O	L	-40	331	327	325	327	
	233498	CV 10x10	F	O	L	-40	361	347	349	352	
	233499	CV 10x10	F	O	L	-40	347	360	359	355	
	233504	CV 10x10	F	O	L	-40	354	369	359	361	
	233509	CV 10x10	F	O	L	-40	362	364	359	361	
812036	230903	CV 10x10	F	O	L	-40	346	347	349	347	
	233487	CV 10x10	F	O	L	-40	335	342	341	339	
	233493	CV 10x10	F	O	L	-40	352	329	339	340	
903313	230913	CV 10x10	F	O	L	-40	369	371	366	369	
	230916	CV 10x10	F	O	L	-40	359	350	364	357	

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosThickn	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>=						-40	42	42	42	60	
Set values <=											
903313	233512	CV 10x10	F	O	L	-40	372	354	367	364	
>=						-40	29	29	29	46	
Set values <=											
707210	226898	CV 10x10	F	O	T	-40	229	268	297	264	Strain aged 5%, 60min at 250°C
812009	226902	CV 10x10	F	O	T	-40	250	260	33	181	Strain aged 5%, 60min at 250°C
812010	225511	CV 10x10	F	O	T	-40	219	335	328	294	Strain aged 5%, 60min at 250°C
812034	230943	CV 10x10	F	O	T	-40	276	264	235	259	Strain aged 5%, 60min at 250°C
812036	226247	CV 10x10	F	O	T	-40	333	330	330	331	Strain aged 5%, 60min at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosThickn:
K: ½
O: surface
C02;Dir:
L: longitudinal
T: transverse
C42;SV: single value
C43;AV: average value

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Z02 Inspection representative voestalpine Grobblech
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Test results: C40-C49 Impact Test acc. DIN / EN

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43	
Heat No.	Plate No	shape	loc.	PosThickn	Dir	temp	SV	SV	SV	AV	samp.cond.
						°C	J	J	J	J	

samp.cond.: sample condition

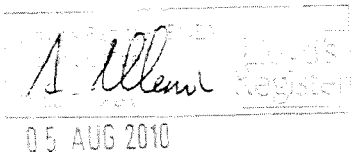
Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn	C01 loc.	C02 Dir	C12 Rm	C12 Rm	C12 Rm	Z(SV)	Z(SV)	Z(SV)	Z(AV)
		mm	mm			MPa	MPa	MPa	%	%	%	%
>=						424	424	424	25	25	25	35
Set values <=												
903313	232213	Ø	10.03	F	S	574	574	575	83	83	83	83
>=						416	416	416	25	25	25	35
Set values <=												
707210	226889	Ø	10.03	F	S	563	562	561	82	83	82	82
812009	226921	Ø	10.04	F	S	566	564	566	82	79	84	82
812011	226897	Ø	10.04	F	S	554	553	553	76	76	82	78
812034	232210	Ø	10.03	F	S	562	563	562	84	82	84	83
812036	226291	Ø	10.04	F	S	571	569	569	81	79	84	81
>=						412	412	412	25	25	25	35
Set values <=												
707210	226889	Ø	10.03	F	S	563	562	561	82	83	82	82
812014	230865	Ø	10.03	F	S	543	546	543	82	82	82	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Z02 Inspection representative voestalpine Grobblech
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Chemical composition (Product analysis)

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
	>=		.150				.015														
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100		.43	.22	.090	.110	.900
707210	226882	.034	.330	1.630	.006	.0003	.041	.160	.170	.010	.160	.004	.037	.014	.0047	.0002	.36	.15	.041	.055	.500
	226926	.032	.340	1.640	.007	.0003	.040	.160	.170	.010	.170	.004	.039	.014	.0044	.0002	.36	.15	.043	.057	.510
	230861	.033	.340	1.620	.006	.0005	.042	.160	.170	.010	.170	.005	.037	.014	.0047	.0003	.36	.15	.042	.056	.510
812009	226891	.024	.330	1.640	.007	.0003	.044	.180	.170	.007	.170	.003	.040	.014	.0046	.0002	.36	.14	.043	.057	.527
	226893	.028	.330	1.620	.006	.0004	.042	.170	.170	.006	.160	.004	.040	.014	.0051	.0002	.36	.14	.044	.058	.506
	226901	.024	.340	1.630	.007	.0005	.042	.180	.170	.008	.170	.003	.040	.014	.0048	.0002	.36	.14	.043	.057	.528
	226905	.024	.330	1.640	.007	.0003	.043	.180	.170	.007	.170	.003	.040	.014	.0049	.0002	.36	.14	.043	.057	.527
	226919	.025	.340	1.630	.007	.0003	.040	.180	.170	.006	.180	.003	.039	.013	.0048	.0002	.36	.14	.042	.055	.536
	226921	.026	.340	1.640	.007	.0003	.040	.180	.170	.006	.190	.003	.038	.013	.0046	.0002	.36	.14	.041	.054	.546
812010	226896	.030	.330	1.630	.006	.0009	.036	.170	.170	.005	.160	.003	.039	.013	.0057	.0002	.36	.14	.042	.055	.505
812011	226897	.024	.340	1.610	.006	.0010	.036	.180	.180	.005	.170	.003	.039	.013	.0050	.0002	.35	.14	.042	.055	.535
812014	226916	.025	.310	1.650	.008	.0007	.032	.170	.170	.004	.160	.004	.035	.014	.0048	.0002	.36	.14	.039	.053	.504
	226924	.025	.310	1.650	.008	.0007	.032	.170	.170	.003	.160	.003	.036	.014	.0049	.0002	.36	.14	.039	.053	.503
812034	230943	.032	.340	1.570	.006	.0009	.030	.180	.170	.003	.160	.003	.040	.012	.0047	.0002	.35	.14	.043	.055	.513
	233490	.031	.340	1.620	.006	.0009	.037	.180	.170	.004	.160	.004	.040	.013	.0045	.0002	.36	.14	.044	.057	.514
	233496	.028	.340	1.630	.006	.0008	.036	.170	.170	.004	.160	.003	.040	.013	.0041	.0002	.36	.14	.043	.056	.504
	233505	.027	.330	1.610	.005	.0008	.034	.170	.170	.002	.160	.003	.039	.013	.0046	.0002	.35	.14	.042	.055	.502
812036	226247	.027	.320	1.600	.007	.0008	.035	.170	.180	.006	.160	.004	.038	.013	.0040	.0003	.35	.14	.042	.055	.516
	230906	.028	.320	1.630	.007	.0006	.036	.170	.170	.006	.160	.004	.038	.013	.0042	.0002	.36	.14	.042	.055	.506
	233491	.031	.330	1.620	.007	.0008	.037	.180	.170	.006	.160	.004	.038	.013	.0042	.0002	.36	.14	.042	.055	.516
903313	226249	.031	.330	1.610	.006	.0007	.038	.180	.180	.003	.160	.003	.040	.012	.0047	.0002	.36	.14	.043	.055	.523
	230909	.030	.330	1.600	.006	.0005	.038	.170	.170	.003	.160	.003	.039	.012	.0046	.0002	.35	.14	.042	.054	.503
	230915	.030	.330	1.600	.006	.0006	.039	.170	.170	.003	.160	.003	.040	.012	.0049	.0002	.35	.14	.043	.055	.503
	233511	.030	.330	1.590	.006	.0006	.037	.170	.170	.002	.160	.003	.040	.012	.0049	.0002	.35	.14	.043	.055	.502

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

Z03 Stamp of the inspection representative

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05 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
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Remarks

We confirm that the delivery specified above corresponds to the order (and standard).

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

Z03 Stamp of the inspection representative LR

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Z02 Inspection representative voestalpine Grobblech
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voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

VNA1000097-1

Z02 Date 02-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322227/US	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010

Date of dispatch 28-07-2010 6D

A06 Customer: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

A07 OrderNo.: 1335-10

A06 Consignee: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

A10 - Supplementary information
*Z35 for ITEM NO.: 50, 60, 70, 80, 90.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
707210	226882/1	80	40,00	2450,0	12000	1		9.397	74750	28-06-2010	TYPE 28
707210	226889/1	80	40,00	2450,0	12000	1		9.400	74750	28-06-2010	TYPE 28
707210	226898/1	110	35,00	2500,0	10000	1		7.009	74750	01-07-2010	TYPE 27
707210	226906/1	30	25,00	2600,0	12000	1		6.271	74750	28-06-2010	TYPE 27
707210	226908/1	30	25,00	2600,0	12000	1		6.270	74750	05-07-2010	TYPE 27
707210	226926/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
707210	226926/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
707210	227278/1	20	20,00	2500,0	12000	1		4.866	74750	28-06-2010	TYPE 27
707210	227279/1	20	20,00	2500,0	12000	1		4.867	74750	28-06-2010	TYPE 27
707210	230860/1	90	50,00	2200,0	12000	1		10.569	74750	19-07-2010	TYPE 28
707210	230861/1	90	50,00	2200,0	12000	1		10.560	74750	19-07-2010	TYPE 28
707210	230862/1	90	50,00	2200,0	12000	1		10.560	74750	19-07-2010	TYPE 28
812009	226891/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226893/1	80	40,00	2450,0	12000	1		9.394	74750	30-06-2010	TYPE 28
812009	226895/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28
812009	226900/1	110	35,00	2500,0	9605	1		6.702	74750	25-07-2010	TYPE 27

A04 Symbol of the manufacturer's work

Z03 Stamp of the inspection representative

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Z02 Inspection representative voestalpine Grobblech (Level 2) Aumair

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812009	226901/1	80	40,00	2450,0	12000	1		9.399	74750	06-07-2010	TYPE 28
812009	226902/1	110	35,00	2500,0	10000	1		7.007	74750	29-06-2010	TYPE 27
812009	226903/1	80	40,00	2450,0	12000	1		9.395	74750	30-06-2010	TYPE 28
812009	226904/1	110	35,00	2500,0	10000	1		7.038	74750	29-06-2010	TYPE 27
812009	226905/1	80	40,00	2450,0	12000	1		9.402	74750	30-06-2010	TYPE 28
812009	226907/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28
812009	226909/1	80	40,00	2450,0	12000	1		9.396	74750	30-06-2010	TYPE 28
812009	226911/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226913/1	80	40,00	2450,0	12000	1		9.397	74750	30-06-2010	TYPE 28
812009	226915/1	80	40,00	2450,0	12000	1		9.399	74750	30-06-2010	TYPE 28
812009	226917/1	80	40,00	2450,0	12000	1		9.400	74750	30-06-2010	TYPE 28
812009	226919/1	80	40,00	2450,0	12000	1		9.396	74750	30-06-2010	TYPE 28
812009	226921/1	80	40,00	2450,0	12000	1		9.428	74750	01-07-2010	TYPE 28
812010	226888/1	110	35,00	2500,0	10000	1		7.009	74750	28-06-2010	TYPE 27
812010	226890/1	110	35,00	2500,0	10000	1		7.008	74750	28-06-2010	TYPE 27
812010	226892/1	110	35,00	2500,0	10000	1		7.011	74750	28-06-2010	TYPE 27
812010	226894/1	110	35,00	2500,0	10000	1		7.011	74750	28-06-2010	TYPE 27
812010	226896/1	110	35,00	2500,0	10000	1		7.005	74750	28-06-2010	TYPE 27
812011	226897/1	80	40,00	2450,0	12000	1		9.403	74750	30-06-2010	TYPE 28
812014	226910/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226910/1	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226912/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226912/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226914/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226914/2	10	15,00	2600,0	12000	1		3.827	74750	10-07-2010	TYPE 27
812014	226916/1	10	15,00	2600,0	12000	1		3.845	74750	09-07-2010	TYPE 27
812014	226916/2	10	15,00	2600,0	12000	1		3.839	74750	09-07-2010	TYPE 27
812014	226918/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226918/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226920/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226920/2	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226922/1	10	15,00	2600,0	12000	1		3.827	74750	28-06-2010	TYPE 27
812014	226922/2	10	15,00	2600,0	12000	1		3.826	74750	28-06-2010	TYPE 27
812014	226924/1	10	15,00	2600,0	12000	1		3.828	74750	28-06-2010	TYPE 27
812014	226924/2	10	15,00	2600,0	12000	1		3.825	74750	28-06-2010	TYPE 27
812014	230865/1	90	50,00	2200,0	12000	1		10.536	74750	19-07-2010	TYPE 28
812034	230943/1	110	35,00	2500,0	10000	1		7.009	74750	07-07-2010	TYPE 27

Z03 Stamp of the inspection representative

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Z02 Inspection representative voestalpine Grobblech (Level 2) Aumair

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812034	233486/1	60	30,00	2450,0	12000	1		7.074	74750	19-07-2010	TYPE 28
812034	233488/1	60	30,00	2450,0	12000	1		7.076	74750	19-07-2010	TYPE 28
812034	233490/1	60	30,00	2450,0	12000	1		7.076	74750	22-07-2010	TYPE 28
812034	233492/1	60	30,00	2450,0	12000	1		7.079	74750	22-07-2010	TYPE 28
812034	233494/1	60	30,00	2450,0	12000	1		7.074	74750	22-07-2010	TYPE 28
812034	233495/1	30	25,00	2600,0	12000	1		6.272	74750	19-07-2010	TYPE 27
812034	233496/1	60	30,00	2450,0	12000	1		7.076	74750	22-07-2010	TYPE 28
812034	233497/1	30	25,00	2600,0	12000	1		6.272	74750	19-07-2010	TYPE 27
812034	233498/1	60	30,00	2450,0	12000	1		7.078	74750	22-07-2010	TYPE 28
812034	233499/1	30	25,00	2600,0	12000	1		6.271	74750	19-07-2010	TYPE 27
812034	233501/1	30	25,00	2600,0	12000	1		6.272	74750	22-07-2010	TYPE 27
812034	233503/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
812034	233504/1	10	15,00	2600,0	12000	1		3.829	74750	22-07-2010	TYPE 27
812034	233504/2	10	15,00	2600,0	12000	1		3.827	74750	22-07-2010	TYPE 27
812034	233505/1	30	25,00	2600,0	12000	1		6.271	74750	22-07-2010	TYPE 27
812034	233506/1	10	15,00	2600,0	12000	1		3.828	74750	22-07-2010	TYPE 27
812034	233506/2	10	15,00	2600,0	12000	1		3.827	74750	22-07-2010	TYPE 27
812034	233507/1	30	25,00	2600,0	12000	1		6.272	74750	22-07-2010	TYPE 27
812034	233509/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
812036	230876/1	20	20,00	2500,0	12000	1		4.848	74750	09-07-2010	TYPE 27
812036	230877/1	20	20,00	2500,0	12000	1		4.848	74750	09-07-2010	TYPE 27
812036	230903/1	40	20,00	2550,0	12000	1		4.937	74750	05-07-2010	TYPE 28
812036	230904/1	40	20,00	2550,0	12000	1		4.939	74750	07-07-2010	TYPE 28
812036	230905/1	40	20,00	2550,0	12000	1		4.941	74750	06-07-2010	TYPE 28
812036	230906/1	40	20,00	2550,0	12000	1		4.942	74750	07-07-2010	TYPE 28
812036	230907/1	40	20,00	2550,0	12000	1		4.965	74750	07-07-2010	TYPE 28
812036	230908/1	40	20,00	2550,0	12000	1		4.966	74750	06-07-2010	TYPE 28
812036	233487/1	70	35,00	2000,0	6000	1		3.367	74750	19-07-2010	TYPE 28
812036	233489/1	100	30,00	2000,0	12000	1		5.780	74750	19-07-2010	TYPE 27
812036	233491/1	100	30,00	2000,0	12000	1		5.784	74750	19-07-2010	TYPE 27
812036	233493/1	120	30,00	2000,0	12000	1		5.782	74750	19-07-2010	TYPE 27
903313	230909/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230910/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230911/1	40	20,00	2550,0	12000	1		4.940	74750	07-07-2010	TYPE 28
903313	230912/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230913/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230914/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28

Z03 Stamp of the inspection representative

LR

Z02 Inspection representative voestalpine Grobblech (Level 2) Aumair

voestalpine

Abnahme

voestalpine ONE STEP AHEAD.

05 AUG 2010

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
903313	230915/1	40	20,00	2550,0	12000	1		4.963	74750	07-07-2010	TYPE 28
903313	230916/1	40	20,00	2550,0	12000	1		4.965	74750	05-07-2010	TYPE 28
903313	230917/1	40	20,00	2550,0	12000	1		4.964	74750	05-07-2010	TYPE 28
903313	230918/1	40	20,00	2550,0	12000	1		4.963	74750	05-07-2010	TYPE 28
903313	230919/1	40	20,00	2550,0	12000	1		4.890	74750	07-07-2010	TYPE 28
903313	230920/1	40	20,00	2550,0	12000	1		4.892	74750	07-07-2010	TYPE 28
903313	233508/1	50	25,00	2350,0	12000	1		5.673	74750	22-07-2010	TYPE 28
903313	233510/1	50	25,00	2350,0	12000	1		5.674	74750	22-07-2010	TYPE 28
903313	233511/1	30	25,00	2600,0	12000	1		6.273	74750	22-07-2010	TYPE 27
903313	233512/1	50	25,00	2350,0	12000	1		5.676	74750	22-07-2010	TYPE 28
	Sum					100		620.824			

B14 - Supplementary information

length-deviation for plate(s) 226900/1: Customer accepted the deviation.

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.
ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

Remarks

SPECIFICATION
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, EN 10160 class E2/Edge Zone;

TEST EQUIPMENT
Apparatus: mechanices ultrasonic "ON-LINE"-testing system (manufacturer: NDT-SYSTEMS & SERVICES);
Probe: 3STSE 18.3/8 PB5, SEZ5R10RS 3, SE3 18.3/10 5A (5MHz);
watergapcoupling;

RESULT
The plates are within the specification.

NOTE
Operator:
Haas H; Stufe 1/level 1 nach/acc. to ÖNORM-EN 473.
Prischl N.;Stufe 2/level 2 nach/acc. to ÖNORM-EN 473

Z03 Stamp of the inspection representative

LR

Z02 Inspection representative voestalpine Grobblech (Level 2) Aumair

voestalpine

Abnahme

voestalpine ONE STEP AHEAD.

Bureau Veritas Registered

05 AUG 2010

Certificate Number: **VNA 1000097 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **0535001**

Date: **03-08-2010**

Order Status: **incomplete**

Inspection Dates
First: **28-07-2010**

final: **03-08-2010**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Project Materials GmbH**
Hansallee 201
D-40549 DÜSSELDORF

Order No.: **1335-10**

Description:

2 piece(s) of steel plate(s) **19916** kgs, as per attached inspection Certificate no.: **A0322263**

Specification

S460G2+M Z35* EN 10225 : 2009

Heat treatment/Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☑
review manufacturer's declared analysis: yes ☑
witness / verify ultrasonic examination: yes ☑ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☑
witness /verify corrosion testing: yes ☐ n/a ☑
random visual and dimensional control and check of hard stamping: yes ☑

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LR

12 AUG 2010

Lloyd's Register EMEA
Vienna Office
Lloyd's Register

Kurt Huber A. ALTENDORFER
Surveyor to Lloyd's Register EMEA

A member of the Lloyd's Register Group

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voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.2

VNA1000097-2

Z02 Date 11-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322263	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010

Date of dispatch 03-08-2010 6D

A06 Customer: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

A07 OrderNo.: 1335-10

A06 Consignee: Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
BOURI GRM GAS
*Z35 for ITEM NO.: 80, 90.

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED. FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. SPEC. 3417-000-S-SP-MEL-90002 REV.D01. SPEC. 08832.STR.MME-SPC REV.8.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812009	226899/1	80	40,00	2450,0	12000	1		9.397	74981	28-07-2010	TYPE 28
812014	230866/1	90	50,00	2200,0	12000	1		10.519	74981	03-08-2010	TYPE 28
		Sum				2		19.916			

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed. ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

B14 - Supplementary information
EN 10163 - A3 - Repair-welding not permitted
Dimensional tolerances acc. EN 10029/91
Flatness acc. EN 10029/91 class N
Thicknesstolerance acc. EN 10029/91 class A

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
12 AUG 2010
Lloyd's Register

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=		.150				.015														
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.43	.22	.090	.110	.900
812009	.029	.330	1.630	.007	.0007	.042	.180	.170	.007	.160	.004	.040	.014	.0046	.0002	.36	.14	.044	.058	.517
812014	.028	.310	1.590	.007	.0010	.031	.170	.170	.003	.160	.004	.035	.014	.0049	.0002	.35	.14	.039	.053	.503

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosThickn	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
>=							420	420	520		17.0		
Set values <=									680			90.00	90.00
812009	226899	30,0	40.59	F	O	T		534	606	A5	23.7		88.11
>=							415	415	515		17.0		
Set values <=									675			90.00	90.00
812014	230865	Ø	10.00	F	V	T		452	547	A5	31.4		82.77

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosThickn:
O: surface
V: ¼
C02;Dir:
T: transverse
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z03 Stamp of the inspection representative

LR

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Vienna Office
Initials: AVA
12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

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Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosThickn	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
	>=					-40	42	42	42	60
Set values	<=									
812009	226899	CV 10x10	F	O	L	-40	338	354	361	351
812014	230865	CV 10x10	F	O	L	-40	341	346	329	339
	230865	CV 10x10	F	K	L	-40	350	355	363	356

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosThickn:
K: ½
O: surface
C02;Dir:
L: longitudinal
C42;SV: single value
C43;AV: average value

Z03 Stamp of the inspection representative

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12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

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Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn	C01 loc.	C02 Dir	C12 Rm	C12 Rm	C12 Rm	Z(SV)	Z(SV)	Z(SV)	Z(AV)
		mm	mm			MPa	MPa	MPa	%	%	%	%
>=						416	416	416	25	25	25	35
Set values <=												
812009	226921	Ø	10.04	F	S	566	564	566	82	79	84	82
>=						412	412	412	25	25	25	35
Set values <=												
812014	230865	Ø	10.03	F	S	543	546	543	82	82	82	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis)

B07 Heat No.	B06 Plate No	C	Si	Mn	P	S	Al	Cr	Ni	Mo	Cu	V	Nb	Ti	N	B	Cae	Pcm	LF01	LF02	LF03
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
>=			.150				.015														
Set values <=		.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100		.43	.22	.090	.110	.900
812009	226891	.024	.330	1.640	.007	.0003	.044	.180	.170	.007	.170	.003	.040	.014	.0046	.0002	.36	.14	.043	.057	.527
812014	237914	.030	.310	1.610	.007	.0009	.032	.170	.170	.003	.160	.004	.035	.014	.0048	.0002	.36	.14	.039	.053	.503

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the delivery specified above corresponds to the order (and standard).

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register
12 AUG 2010

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred
Abnahme

voestalpine
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voestalpine

Remarks

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
initials: AM
Lloyd's Register
12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

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ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

VNA1000097-2

Z02 Date 11-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322263/US	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010

Date of dispatch 03-08-2010 6D

A06 Customer: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1335-10

A06 Consignee: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

A10 - Supplementary information
*Z35 for ITEM NO.: 80, 90.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Abnahmedatum	Sachnummer
812009	226899/1	80	40,00	2450,0	12000	1		9.397	74981	28-07-2010	TYPE 28
812014	230866/1	90	50,00	2200,0	12000	1		10.519	74981	03-08-2010	TYPE 28
		Sum				2		19.916			

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed. ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

Remarks

SPECIFICATION
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, EN 10160 class E2/Edge Zone;

TEST EQUIPMENT
Apparatus: mechanized ultrasonic on-line -testing system (Manufacturer: NDT-SYSTEMS & SERVICES) and mechanized ultrasonic off-line-testing system (Manufacturer: Windoff Bahn- und Anlagentechnik GmbH);
Probe: 3STSE 18,3/8 PB5, SEZ5R10RS 3, SE3 18.3/10 5A (5MHz), S140(4MHz)3T/1R;
watergapcoupling

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
12 AUG 2010

Z02
Inspection representative voestalpine Grobblech (Level 3)
Bindreiter

Abnahme

voestalpine
ONE STEP AHEAD.

Remarks

RESULT
The plates are within the specification.

NOTE
Operator:
Steindl M., Haas H; Stufe 1/level 1 nach/acc. to ÖNORM-EN 473.

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register
12 AUG 2010

Z02
Inspection representative voestalpine Grobblech
(Level 3)
Bindreiter

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

Certificate Number:**VNA 1000097 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **0535001**

Date: **04-08-2010**

Order Status: **complete**

Inspection Dates
First: **04-08-2010**

final: **04-08-2010**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Project Materials GmbH**
Hansallee 201
D-40549 DÜSSELDORF

Order No.: **1335-10**

Description:

2 piece(s) of steel plate(s) **21072** kgs, as per attached inspection Certificate no.: **A0322325**

Specification

S460G2+M Z35* EN 10225 : 2009

Heat treatment/Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☑
review manufacturer's declared analysis: yes ☑
witness / verify ultrasonic examination: yes ☑ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☑
witness /verify corrosion testing: yes ☐ n/a ☑
random visual and dimensional control and check of hard stamping: yes ☑

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LR

Lloyd's Register EMEA
Vienna Office
A. Altendorfer
Lloyd's Register

Kurt Huber A. ALTENDORFER
Surveyor to Lloyd's Register EMEA

A member of the Lloyd's Register Group
12 AUG 2010

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Form 1123 (2008.07)

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.2

VNA1000097-3 K

Z02 Date 11-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322325	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010	Abnahmedatum	04-08-2010 Date of dispatch 06-08-2010 6D

A06 Customer: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1335-10

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee: Project Materials GmbH, Hansallee 201, D-40549 DÜSSELDORF

A10 - Supplementary information
BOURI GRM GAS
*Z35 for ITEM NO.: 90.

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED. FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. SPEC. 3417-000-S-SP-MEL-90002 REV.D01. SPEC. 08832.STR.MME-SPC REV.8.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Sachnummer
812010	230863/1	90	50,00	2200,0	12000	1		10.536	75075	TYPE 28
812011	230864/1	90	50,00	2200,0	12000	1		10.536	75075	TYPE 28
	Sum					2		21.072		

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed. ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

B14 - Supplementary information
EN 10163 - A3 - Repair-welding not permitted
Dimensional tolerances acc. EN 10029/91
Flatness acc. EN 10029/91 class N
Thicknesstolerance acc. EN 10029/91 class A

A04 Symbol of the manufacturer's work

voestalpine

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register

12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=		.150				.015														
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.43	.22	.090	.110	.900
812010	.027	.350	1.640	.006	.0003	.040	.170	.180	.005	.190	.003	.036	.012	.0047	.0002	.36	.14	.039	.051	.545
812011	.028	.330	1.590	.006	.0011	.036	.180	.180	.005	.160	.003	.039	.013	.0049	.0002	.35	.14	.042	.055	.525

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Test results: C10-C29 Tensile Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosThickn	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %
>=							415	415	515		17.0		
Set values <=									675			90.00	90.00
812010	230863	Ø	10.03	F	V	T	513	513	575	A5	28.9	89.24	89.15
812011	230864	Ø	10.01	F	V	T		489	571	A5	29.1		85.51

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosThickn:
V: ¼
C02;Dir:
T: transverse
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register

12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine
ONE STEP AHEAD.

voestalpine

Test results: C40-C49 Impact Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosThickn	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
812010	230863	CV 10x10	F	O	L	-40	366	352	384	367
	230863	CV 10x10	F	K	L	-40	387	400	408	398
812011	230864	CV 10x10	F	O	L	-40	399	358	363	373
	230864	CV 10x10	F	K	L	-40	395	384	374	384

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosThickn:
K: ½
O: surface
C02;Dir:
L: longitudinal
C42;SV: single value
C43;AV: average value

Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape mm	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						412	412	412	25	25	25	35
Set values <=												
812010	225511	Ø	10.03	F	S	580	580	580	82	82	84	83
812011	226897	Ø	10.04	F	S	554	553	553	76	76	82	78

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z03 Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register
12 AUG 2010

Z02 Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred
Abnahme

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Chemical composition (Product analysis)

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
	>=		.150				.015														
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100		.43	.22	.090	.110	.900
812010	232776	.029	.350	1.650	.007	.0005	.040	.170	.180	.006	.190	.003	.037	.013	.0052	.0002	.36	.15	.040	.053	.546
812011	230864	.030	.330	1.640	.006	.0013	.037	.180	.180	.005	.160	.003	.040	.013	.0054	.0002	.36	.14	.043	.056	.525

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the delivery specified above corresponds to the order (and standard).

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

Z03 LR
Stamp of the inspection representative

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register

12 AUG 2010

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.2

VNA1000097-3 K

Z02 Date 11-08-2010

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0322325/US	A08 Order-No.:	0535001	A07 OrderDat.	05-05-2010	Abnahmedatum	04-08-2010	Date of dispatch	06-08-2010 6D

A06 Customer
Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

B01 Product: Plate

B02 Material: S460G2+M Z35*

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1335-10

A06 Consignee
Project Materials GmbH
Hansallee 201
D-40549 DÜSSELDORF

A10 - Supplementary information
*Z35 for ITEM NO.: 90.

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	IndWeight kg	total Weight kg	A09 Disp-No 130 42	Sachnummer
812010	230863/1	90	50,00	2200,0	12000	1		10.536	75075	TYPE 28
812011	230864/1	90	50,00	2200,0	12000	1		10.536	75075	TYPE 28
	Sum					2		21.072		

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.
ingot material: electric arc furnace with vacuum treatment; steel is fully killed.

Remarks

SPECIFICATION
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, EN 10160 class E2/Edge Zone;

TEST EQUIPMENT
Apparatus: mechanized ultrasonic off-line-testing system (Manufacturer: Windoff Bahn- und Anlagentechnik GmbH);
Probe: S140(4MHz)3T/1R;
watergapcoupling

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

LR

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register
12 AUG 2010

Z02
Inspection representative voestalpine Grobblech (Level 3)
Bindreiter

Abnahme

voestalpine
ONE STEP AHEAD.

Remarks

RESULT
The plates are within the specification.

NOTE
Operator:
Haas H; Stufe 1/level 1 nach/acc. to ÖNORM-EN 473.

Z03 LR
Stamp of the inspection representative

Lloyd's Register EMEA
Vienna Office
Initials: AA
Lloyd's Register

12 AUG 2010

Z02
Inspection representative voestalpine
Grobblech
(Level 3)
Bindreiter

Abnahme

voestalpine

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr	job	Barcode
TAL TUBI ACCIAIO LOMBARDA S.p.A.	**1716001444**	**116A80A**	**Q011600206**

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec PO
According to the spc.----------

TMUGF Firma — Data
MTSMD Signature — Date

P. Ancarani — 05/08/2016

PAOLO ANCARANI
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

According to SPEC. AGIP.

N. 08832.STR.MME.SPC REV.8

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000158** **Rev. N°:** **0** **Date:**

Inspection Date: 29/07/2016

Ref.: 1716001444 116A80A

Our Job n. 316001816

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		762X29,6	Tubi SAW CARB. API 5L X65/L450					
				1	12,26	NIPPON STEEL & SUMITOMO METAL CORPORATION	G12219	U-14090151
				1	12,48	NIPPON STEEL & SUMITOMO METAL CORPORATION	G13110	U-14090151
				1	12,25	NIPPON STEEL & SUMITOMO METAL CORPORATION	G12219	U-14090151
			Total:	**3**	**36,99**			
20000		508X25,4	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	8,9	VALCOVNY TRUB	51087	3489/15
				1	8,95	VALCOVNY TRUB	51087	3489/15
			Total:	**2**	**17,85**			

Lloyd's Register EMEA
A member of the Lloyd's Register group
☒ Witnessed ☐ Monitored ☐ Reviewed
Sandro Buscarini - Inspector
Milan Office
03-08-2016

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000158** **Rev. N°:** **0** **Date:**

Inspection Date: 29/07/2016

Ref.: 1716001444 116A80A

Our Job n. 316001816

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
30000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				7	63,52	HUTA BATORY	868266	5276/EXP/R/14
			Total:	**7**	**63,52**			
40000		273X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				2	23,44	ARCELORMITTAL ROMAN	49921	B 3027/1
			Total:	**2**	**23,44**			
50000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,56	HUTA BATORY	872796	2329/EXP/R/16
				1	11,57	HUTA BATORY	872796	2329/EXP/R/16
				1	11,52	HUTA BATORY	872796	2329/EXP/R/16
				1	11,57	HUTA BATORY	872796	2329/EXP/R/16
				10	81,57	HUTA BATORY	848736	845/EXP/R/10
				4	32,63	HUTA BATORY	849228	845/EXP/R/10

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Lloyd's Register EMEA
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☒ Witnessed ☐ Monitored ☐ Reviewed
Sandro Buscarini - Inspector
Milan Office
03-08-2016

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000158** **Rev. N°:** **0** **Date:**

Inspection Date: 29/07/2016

Ref.: 1716001444 116A80A

Our Job n. 316001816

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**18**	**160,42**			
60000		219,1X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,67	ARCELORMITTAL ROMAN	44044	B 8814/1
			Total:	**1**	**11,67**			

Lloyd's Register EMEA
A member of the Lloyd's Register group
☑ Witnessed ☐ Monitored ☐ Reviewed
Sandro Buscarini - Inspector
Milan Office
03-08-2016

Approved by QUALITY2 on 29/07/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF 160542 SIDERPIGHI JOB N°16002704 OUR DDT N°16002633 OF 25/07/16
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

鋼管検査証明書
INSPECTION CERTIFICATE

新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION
本社 HEAD OFFICE：〒100-8071 東京都千代田区丸の内二丁目6番1号 2-6-1, MARUNOUCHI CHIYODA-KU, TOKYO 100-8071 JAPAN
君津製鉄所 KIMITSU WORKS：〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-1141 JAPAN

注文者 SHIPPER：NIPPON STEEL & SUMIKIN BUSSAN CORP.
注文者照合番号 REFERENCE No.：5253-ANY4060
契約番号 CONTRACT No.：4-841-N3-6-8-X001-01
商品名 COMMODITY：SUBMERGED ARC LONGITUDINALLY WELDED STEEL LINE PIPE
規格 SPECIFICATION：API SPEC 5L GR.L450M PSL2 (45TH EDITION, DEC. 2012)
寸法 SIZE：762X29.6X11800
員数 QUANTITY：33 PCS
質量 MASS：NET 208.164KG
特記 NOTE：ORDER NO. ANY4060/NSE2014052 ACCORDING TO EN10204 3.1

需要家 CUSTOMER：SIDERPIGHI S.P.A. CON SOCIO UNICO
需要家管理番号 CUSTOMER'S CONTROL No.：

証明書番号 CERTIFICATE No.：U-14090151 頁 PAGE：1
発行年月日 DATE OF ISSUE：2014-09-18 FSM021 Q05
管理番号 CONTROL No.：524001 (製造番号 PRODUCTION No.)

溶解番号 HEAT NO. / 試験番号 TEST NO.	C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TAI	TAL	B	TE	Ceq
*** SPEC. ***																T2	
MIN																	
MAX H	10	46	170	25	15	50	50	60	50						10	25	43
MIN																	
MAX H																15	
MIN																	
MAX P	10	45	170	25	15	50	50	60	50						10	25	43
MAX P																15	
G09006 H	5	32	155	12	2	2	2	36	13	3	0	1		33	0	17	41
28284 H	(PIECE NO:524001-0030, PIPE NO:5240-01-0032)															4	
28285 P	(PIECE NO:524001-0032, PIPE NO:5240-01-0033)																
28282 P	5	32	153	11	2	1	2	36	13	2	0	1		29	0	16	40
	(PIECE NO:524001-0030, PIPE NO:5240-01-0032)															3	
28283 P	5	32	152	11	2	1	2	36	13	2	0	1		28	0	16	40
	(PIECE NO:524001-0032, PIPE NO:5240-01-0033)																
G12219 H	5	31	157	13	2	1	2	38	13	3	0	1		28	0	17	42
28288 H	(PIECE NO:524001-0020, PIPE NO:5240-01-0021)															4	
28289 H	(PIECE NO:524001-0026, PIPE NO:5240-01-0009)																

溶解番号 HEAT NO. / 試験番号 TEST NO.	引張試験 TENSILE TEST 耐力 YS 0.5% MPA	引張強さ TS MPA	伸び EL %	降伏比 YR %	試験温度 TEST TEMP. °C	衝撃試験 IMPACT TEST 吸収エネルギー 平均値 AVG	衝撃試験 IMPACT TEST 吸収エネルギー 個々の値 EACH	破面率 SHEAR FRACTURE 平均値 AVG %	破面率 SHEAR FRACTURE 個々の値 EACH %	DWTT 破面率 SHEAR FRACTURE 平均値 AVG %	DWTT 破面率 SHEAR FRACTURE 個々の値 EACH %	硬さ試験 HARDNESS TEST	結晶粒度 GRAIN SIZE TEST NO.	備考 REMARKS
MIN	450	535	23		0	27	21							
MAX H	600	760		93										
MIN		535			0	27	21							
MAX H														
MIN					0	27	21							
MAX P														
MAX P														
28284	511	614	54	83	0	478	481	476	477	100	100	100	100	
		661			0	157	162	154	155	97	100	95	95	
					0	404	383	420	408	100	100	100	100	
28285														
28282														
28283														
G12219														
28288	524	616	55	85	0	456	456	460	451	100	100	100	100	
		665			0	172	183	169	176	97	100	95	95	
28289					0	428	441	423	419	100	100	100	100	

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
	ACCEPTABLE.	20.5 MPA 10 SEC. ACCEPTABLE	UT, RT, MT ACCEPTABLE

備考 NOTES
[注1] M: 溶鋼分析 Heat Analysis, P: 母材製品分析 Product Analysis(Base), W: 溶接部製品分析 Product Analysis(Weld) [注2] B: 母材 Base Metal, W: 溶接部 Weld, H: 熱影響部 HAZ [注3] L: 縦方向 Longitudinal, T: 横方向 Transverse [注4] GL: 標点距離 Gauge Length, A:60mm, B:200mm, C:2", D:5", E:5.65√So, F:4√So [注5] G 合格, A:Acceptable [注6] 試験片寸法 Specimen Size, F:10 X10mm, 7:10 X7.5mm, 8:10 X6.7mm, 5:10 X5mm, 3:10 X3.3mm, 2:10 X2.5mm [注7] ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU [注8] AGS: オーステナイト粒度 Austenitic Grain Size, FGS: フェライト粒度 Ferritic Grain Size

CEQ=C+MN/6+(NI+CU)/15+(CR+MO+V)/5, TE=C+MN/20+SI/30+CU/20+NI/60+CR/20+MO/15+V/10+5B, T2=NB+V+TI

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE TO THE APPLICABLE SPECIFICATION BY THE BASIC OXYGEN PROCESS AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE API WITH SATISFACTORY RESULTS.

君津製鉄所 品質保証室
HEAD OF DEPARTMENT QUALITY ASSURANCE DEPT. KIMITSU WORKS

Lloyd's Register EMEA
member of the Lloyd's Register group
Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

お問合せ先 CONTACT ADDRESS：PIPE-IPP@JP.NSSMC.COM

SIDERPIGHI SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 29/07/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF 160542 SIDERPIGHI JOB N°16002704 OUR DDT N°16002633 OF 25/07/16
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

鋼管検査証明書
INSPECTION CERTIFICATE

新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION

本社 HEAD OFFICE : 〒100-8071 東京都千代田区丸の内二丁目6番1号 2-6-1, MARUNOUCHI CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS : 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-1141, JAPAN

注文者 SHIPPER : NIPPON STEEL & SUMIKIN BUSSAN CORP.
注文者照合番号 REFERENCE No. : 5253-ANY4060
契約番号 CONTRACT No. : 4-841-N3-5-8-X001-01
商品名 COMMODITY : SUBMERGED ARC LONGITUDINALLY WELDED STEEL LINE PIPE
規格 SPECIFICATION : API SPEC 5L GR.L450M PSL2 (45TH EDITION, DEC. 2012)
寸法 SIZE : 762X29.6X11800
員数 QUANTITY : 33 PCS
質量 MASS : NET 208,164KG
特記 NOTE : ORDER NO. ANY4060/NSE2014052 ACCORDING TO EN10204 3.1

需要家 CUSTOMER : SIDERPIGHI S.P.A. CON SOCIO UNICO
需要家管理番号 CUSTOMER'S CONTROL No. :

証明書番号 CERTIFICATE No. : U-14090151 頁 PAGE : 2
発行年月日 DATE OF ISSUE : 2014-09-18 FSM021 005
管理番号 CONTROL No. : 524001 (製造番号 PRODUCTION No.)

鋼番号 HEAT NO. / 試験番号 TEST NO.	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TAL	B	TE	Ceq	引張試験 TENSILE TEST 耐力 YS	引張強さ TS	伸び El.	降伏比 YR	試験温度 TEST TEMP. °C	衝撃試験 IMPACT TEST 吸収エネルギー 個々の値 J	破面率 SHEAR FRACTURE %	落重試験 DWTT 破面率 SHEAR FRACTURE %	硬さ試験 HARDNESS TEST	粒度 GRAIN SIZE TEST	備考 REMARKS
28286 P	5	30	158	12	2	1	1	37	14	3	0	1	28	0	17	42											
28287 P	(PIECE NO:524001-0026,PIPE NO:524001-0109)																										
	5	31	157	12	2	1	2	37	14	3	0	1	28	0	17	42											
	(PIECE NO:524001-0020,PIPE NO:524001-0021)																										
G13108 H	5	33	152	10	2	2	2	37	13	3	0	1	35	0	17	41											
28296	(PIECE NO:524001-0022,PIPE NO:524001-0028)																BTA	480	621	54	77	BT	0 FV200	204	196	196	100 100 100 100		
																	WT		672			WT	0 FV167	177	166	156	97 100 95 95		
																						HT	0 FV391	387	397	396	100 100 100 100		
28297	(PIECE NO:524001-0013,PIPE NO:524001-0014)																BT				A							
28294 P	5	32	152	10	2	2	2	37	14	3	0	1	36	0	17	41											
	(PIECE NO:524001-0013,PIPE NO:524001-0014)																										
28295 P	5	33	152	10	2	2	2	37	14	3	0	1	36	0	17	41											
	(PIECE NO:524001-0022,PIPE NO:524001-0028)																										
G13110 H	5	32	158	11	2	2	2	39	13	3	0	1	26	0	17	42											
28292	(PIECE NO:524001-0018,PIPE NO:524001-0016)																BTA	548	641	52	86	BT	0 FV471	480	469	463	100 100 100 100		
																	WT		678			WT	0 FV166	166	155	156	95 95 95 95		
28293	(PIECE NO:524001-0027,PIPE NO:524001-0013)																WT				A	HT	0 FV406	417	420	388	100 100 100 100		
28290 P	5	32	158	10	2	1	2	38	14	3	0	1	26	0	17	42											
	(PIECE NO:524001-0027,PIPE NO:524001-0013)																										

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
	ACCEPTABLE	20.5 MPA 10 SEC. ACCEPTABLE	UT, RT, MT ACCEPTABLE

注記 NOTES
注1 H: 溶鋼分析 Heat Analysis, P: 母材製品分析 Product Analysis(Base), W: 溶接部製品分析 Product Analysis(Weld) 注2 B: 母材 Base Metal, W: 溶接部 Weld, H: 熱影響部 HAZ 注3 L: 縦方向 Longitudinal, T: 横方向 Transverse 注4 GL: 標点距離 Gauge Length, A:50mm, B:200mm, C:2", D:8", E:5.65/√So, F:4/√So 注5 G 合格, A:Acceptable 注6 試験片寸法 Specimen Size, F:10×10mm, 7:10×7.5mm, 6:10×6.7mm, 5:10×5mm, 3:10×3..3mm, 2:10×2.5mm 注7 ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU 注8 AGS: オーステナイト粒度 Austenitic Grain Size, FGS:フェライト粒度 Ferrite Grain Size

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspecter
Milan Office

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君津製鉄所 品質保証室
HEAD OF DEPARTMENT
QUALITY ASSURANCE DEPT.
KIMITSU WORKS

お問合せ先 CONTACT ADDRESS : PIPE-IPP@JP.NSSMC.COM

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TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 29/07/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF 160542 SIDERPIGHI JOB N°16002704 OUR DDT N°16002633 OF 25/07/16
N° 2 MT 24,51 HEAT G12219 DIMENSIONS 762 x 29,6

鋼管検査証明書
INSPECTION CERTIFICATE

新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION
本社 HEAD OFFICE：〒100-8071 東京都千代田区丸の内二丁目6番1号 2-6-1, MARUNOUCHI CHIYODA-KU, TOKYO 100-807 1, JAPAN
君津製鉄所 KIMITSU WORKS：〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-114 1, JAPAN

注文者 SHIPPER：NIPPON STEEL & SUMIKIN BUSSAN CORP.
注文者照合番号 REFERENCE No.：5253-ANY4060
契約番号 CONTRACT No.：4-841-M3-5-8-X081-01
品名 COMMODITY：SUBMERGED ARC LONGITUDINALLY WELDED STEEL LINE PIPE
規格 SPECIFICATION：API SPEC 5L GR.L450M PSL2 (45TH EDITION,DEC.2012)
寸法 SIZE：762X28.6X11800
数量 QUANTITY：33 PCS
質量 MASS：NET 208.164KG
備考 NOTE：ORDER NO.ANY4060/NSE2014052 ACCORDING TO EN10204 3.1

需要家 CUSTOMER：SIDERPIGHI S.P.A. CON SOCIO UNICO
需要家管理番号 CUSTOMER'S CONTROL No.：
証明書番号 CERTIFICATE No.：U-14090151 頁 PAGE：3E
発行年月日 DATE OF ISSUE：2014-09-18 FSM021 Q05
管理番号 CONTROL No.：524001 (製造番号 PRODUCTION No.)

鋼番号 HEAT NO. / 試験番号 TEST NO.	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TAL	TAL PPM	B PPM	TE	Ceq	引張試験 TENSILE TEST 耐力 YS 0.5% MPA	引張強さ TS MPA	伸び EL %	降伏比 YR	試験温度 TEST TEMP. °C	衝撃試験 IMPACT TEST 吸収エネルギー IMPACT VALUE 平均値 AVG	各々の値 EACH J	剪断破面率 SHEAR FRACTURE 平均値 AVG	各々の値 EACH %	落重試験 DWTT 剪断破面率 SHEAR FRACTURE 平均値 AVG	各々の値 EACH %	硬さ試験 HARDNESS TEST	粒度試験 GRAIN SIZE TEST	備考 REMARKS
28291	P 5	32	156	10	2	1	2	38	14	3	0	1		25	0	17 T2 4	42														
	(PIECE NO:524001-0018.PIPE NO:5240-01-0018)																														
G13254	H 5	32	156	10	2	2	1	38	13	3	0	1		30	0	17	41														
28279	(PIECE NO:524001-0033.PIPE NO:5240-01-0004)																	BT TA WT	525	638 622	53	82	BT WT HT	0	F V 135 157	167 181	148 155	150 136	100 100	100 100	100 100	
28280	(PIECE NO:524001-0012.PIPE NO:5240-01-0005)																	WT					A	0	F V 433	437	430	431	100	100	100	
28277	P 5	31	154	9	2	1	1	37	14	3	0	1		30	0	17	41														
	(PIECE NO:524001-0033.PIPE NO:5240-01-0004)																														
28278	P 5	31	153	9	2	1	1	37	13	3	0	1		31	0	16	41														
	(PIECE NO:524001-0012.PIPE NO:5240-01-0005)																														

*** TYPE AND SIZE OF REFERENCE INDICATOR OR IMAGE QUALITY INDICATOR USED FOR NON-DESTRUCTIVE INSPECTION FOR WELD ***
UT: 6.2 MM (0.125 INCH) DIAMETER THROUGH THICKNESS DRILLED HOLE
RT: WIRE-TYPE (ISO) IMAGE QUALITY INDICATOR

*** THE DATA PRESENTED WAS CONVERTED FROM THE MEASUREMENT SYSTEM USED FOR THE ORIGINAL INSPECTION ***

*** NAME AND LOCATION OF FACILITIES USED FOR PIPE MANUFACTURING, PLATE ROLLING AND STEEL MAKING ***
NIPPON STEEL & SUMITOMO METAL CORPORATION KIMITSU WORKS

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
	ACCEPTABLE	20.6 MPA 10 SEC. ACCEPTABLE	UT, RT, MT ACCEPTABLE

注釈 NOTES1
[注1] H: 溶鋼分析 Heat Analysis, P: 母材製品分析 Product Analysis(Base), W: 溶接部製品分析 Product Analysis(Weld) [注2] B: 母材 Base Metal, W: 溶接部 Weld, H: 熱影響部 HAZ [注3] L: 縦方向 Longitudinal, T: 横方向 Transverse [注4] GL: 標点距離 Gauge Length, A:50mm, B:200mm, C:2", D:8", E:5.65/√So, F:4/√So [注5] G 合格 A:Acceptable [注6] 試験片寸法 Specimen Size, P:10×10mm, 7:10×7.5mm, 8:10×8.7mm, 5:10×5mm, 3:10×3.3mm, 2:10×2.5mm [注7] ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU [注8] AGS: オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size

注釈 NOTES2

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

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君津製鉄所 品質保証室
HEAD OF DEPARTMENT
QUALITY ASSURANCE DEPT.
KIMITSU WORKS

お問合せ先 CONTACT ADDRESS：PIPE-IPP6JP.NSSMC.COM

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Approved by QUALITY2 on 29/07/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 1 MT 12,48 HEAT G13110 DIMENSIONS 762 x 29,6

TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF160312 SIDERPIGHI JOB N°16001536 OUR DDT N°16001557 OF 03/05/16
N° 1 MT 12,48 HEAT G13110 DIMENSIONS 762 x 29,6

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鋼管検査証明書
INSPECTION CERTIFICATE

新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION

本社 HEAD OFFICE：〒100-8071 東京都千代田区丸の内二丁目6番1号 2-6-1, MARUNOUCHI CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS：〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-1141, JAPAN

注文者 SHIPPER：NIPPON STEEL & SUMIKIN BUSSAN CORP.
注文者照合番号 REFERENCE No.：5253-ANY4060
契約番号 CONTRACT No.：4-841-N3-5-8-X001-01
商品名 COMMODITY：SUBMERGED ARC LONGITUDINALLY WELDED STEEL LINE PIPE
規格 SPECIFICATION：API SPEC 5L GR.L450M PSL2 (45TH EDITION, DEC. 2012)
寸法 SIZE：762X29.6X11800
員数 QUANTITY：33 PCS
質量 MASS：NET 208.164KG
特記 NOTE：ORDER NO. ANY4060/NSE2014052 ACCORDING TO EN10204 3.1

需要家 CUSTOMER：SIDERPIGHI S.P.A. CON SOCIO UNICO
需要家管理番号 CUSTOMER'S CONTROL No.：

証明書番号 CERTIFICATE No.：N-14090151 頁 PAGE：1
発行年月日 DATE OF ISSUE：2014-09-18 FSM021 Q05
管理番号 CONTROL No.：524001 (製造番号 PRODUCTION No.)

製造番号 HEAT NO. / 試験番号 TEST NO.	C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TA	TAL	B	TE	Ceq	LOCATION	ORIENTATION	引張試験 TENSILE TEST 降伏 YS 0.5% MPA	引張強さ TS MPA	伸び EL %	降伏比 YR %	試験温度 TEST TEMP. °C	衝撃試験 IMPACT TEST 吸収エネルギー 平均値 AVG J	吸収エネルギー 各々の値 EACH J	剪断破面率 SHEAR FRACTURE 平均値 AVG %	剪断破面率 各々の値 EACH %	落重試験 DWTT 剪断破面率 SHEAR FRACTURE 平均値 AVG %	剪断破面率 各々の値 EACH %	硬さ試験 HARDNESS TEST	結晶粒度試験 GRAIN SIZE TEST	備考 REMARKS
*** SPEC. ***																																
MIN																		BT	A	450	535	23		0	FV 27	21						
MAX	H	10	45	170	25	15	50	50	5050						10	25	43	BT	A	600	760		93										
MIN																		WT			535											
MAX	H															15																
MIN																		HT						0	FV 27	21						
MAX	P	10	45	170	25	15	50	50	5050						10	25	43															
MAX	P															15																
G09006	H	5	32	155	12	2	2	2	36	13	3	0	1		33	0	17	41														
28284	H	(PIECE NO:524001-0030, PIPE NO:5240-01-0032)																	BT	A	511	614	54	83		HT	0	FV 478	461	476	477	100	100	100	100
																			WT		661				WT	0	FV 157	169	154	155	97	100	95	95
																			HT						HT	0	FV 404	383	426	405	100	100	100	100
28285	H	(PIECE NO:524001-0032, PIPE NO:5240-01-0033)																	WT														
28282	P	5	32	153	11	2	1	2	36	13	2	0	1		28	0	16	40						A									
	P																3																
		(PIECE NO:524001-0030, PIPE NO:5240-01-0032)																															
28283	P	5	32	152	11	2	1	2	36	13	2	0	1		28	0	16	40															
	P																3																
		(PIECE NO:524001-0032, PIPE NO:5240-01-0033)																															
G12219	H	5	31	157	13	2	1	2	38	13	3	0	1		28	0	17	42															
	H																4																
28288	H	(PIECE NO:524001-0020, PIPE NO:5240-01-0021)																	BT	A	524	616	55	85		HT	0	FV 456	455	460	451	100	100	100	100
																			WT		665				WT	0	FV 176	183	169	176	97	100	95	95
28289	H	(PIECE NO:524001-0026, PIPE NO:5240-01-0009)																	WT						HT	0	FV 428	441	423	419	100	100	100	100

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
	ACCEPTABLE	20.5 MPA 10 SEC ACCEPTABLE	UT, RT, MT ACCEPTABLE

注記 NOTES1
注1 H: 溶鋼分析 Heat Analysis, P: 母材製品分析 Product Analysis(Base), W: 溶接部製品分析 Product Analysis(Weld) 注2 B: 母材 Base Metal, W: 溶接部 Weld, H: 熱影響部 HAZ 注3 L: 圧延方向 Longitudinal, T: 板方向 Transverse 注4 GL: 標点距離 Gauge Length, A:50mm, B:200mm, C:2", D:5", E:5.65/√So, F:4/√So 注5 合格 A:Acceptable 注6 試験片寸法 Specimen Size, F:10×10mm, 7:10×7.5mm, 6:10×6.7mm, 5:10×5mm, 3:10×3.3mm, 2:10×2.5mm 注7 ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU 注8 AGS: オーステナイト粒度 Austenite Grain Size, FGS: フェライト粒度 Ferite Grain Size

注記 NOTES2
CEQ=C+MN/6+(NI+CU)/15+(CR+MO+V)/5, TE=C+MN/20+SI/30+CU/20+NI/60+CR/20+MO/15+V/10+5B, T2=NB+V+TI

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☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
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君津製鉄所 品質保証室
HEAD OF DEPARTMENT QUALITY ASSURANCE DEPT. KIMITSU WORKS

お問合せ先 CONTACT ADDRESS：PIPE-IPP6JP.WSSMC.COM

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TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF160312 SIDERPIGHI JOB N°16001536 OUR DDT N°16001557 OF 03/05/16
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Approved by QUALITY2 on 29/07/16

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NIPPON STEEL & SUMITOMO METAL CORPORATION

本　社：〒100-8071 東京都千代田区丸の内二丁目6番1号
HEAD OFFICE：6-1, MARUNOUCHI 2-CHOME, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所：〒299-1141 千葉県君津市君津1番地
KIMITSU WORKS：1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-1141, JAPAN

証明書番号 CERTIFICATE No.：U-14090151　頁 PAGE：2
発行年月日 DATE OF ISSUE：2014-09-18　FSM021 Q05

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寸法 SIZE：762X29.6X11800
員数 QUANTITY：33 PCS
質量 MASS：NET 208.164KG
得意先 CUSTOMER：SIDERPIGHI S.P.A. CON SOCIO UNICO
管理番号 CUSTOMER'S CONTROL No.：
備考 NOTE：ORDER NO. ANY4060/NSE2014052 ACCORDING TO EN10204 3.1
管理番号 CONTROL No.：524001 (製造番号 PRODUCTION No.)

製鋼番号 HEAT NO. / 試験番号 TEST NO.	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TAI	TAL	B	TE	Ceq	LOCATION	DIRECTION	引張試験 TENSILE TEST 耐力 降伏点 YP 0.5%	引張強さ TS	伸び EL	降伏比 YR	BEND TEST RESULT	LOCATION	DIRECTION	試験温度 TEST TEMP. °C	衝撃試験 IMPACT TEST NOTCH	LOCATION	DIRECTION	衝撃値 IMPACT VALUE 平均値 AVG	個々の値 EACH	破面遷移率 SHEAR FRACTURE 平均値 AVG	個々の値 EACH	落重試験 DWTT 試験温度	SHEAR FRACTURE 平均値 AVG	個々の値 EACH	LOCATION	硬さ試験 HARDNESS TEST	結晶粒度試験 GRAIN SIZE TEST	備考 REMARKS
					PPM								PPM	PPM	PPM					MPA		%					°C				J		%		%					
28286	P 5	30	158	12	2	1	1	37	14	3	0	1		28	0	T2 1742																									
28287	(PIECE NO:524001-0026,PIPE NO:5240-01-0009) P 5	31	157	12	2	1	2	37	14	3	0	1		28	0	1742																									
	(PIECE NO:524001-0020,PIPE NO:5240-01-0021)																																							
G13108	H 5	33	152	10	2	2	2	37	13	3	0	1		35	0	1741																									
28296	(PIECE NO:524001-0022,PIPE NO:5240-01-0028)																BTA	WT	480	621 672	54	77		BT HT		0	FV 200 167 391	203 175 385	196 166 397	198 168 388	100 100 100	100 100 100	100 95 100	100 95 100							
28297	(PIECE NO:524001-0013,PIPE NO:5240-01-0014)																WT						A																	
28294	P 5	33	152	10	2	2	2	37	14	3	0	1		36	0	1741																									
	(PIECE NO:524001-0013,PIPE NO:5240-01-0014)																																							
28295	P 5	33	152	10	2	2	2	37	14	3	0	1		36	0	1741																									
	(PIECE NO:524001-0022,PIPE NO:5240-01-0028)																																							
G13110	H 5	32	158	11	2	2	2	35	13	3	0	1		26	0	1742																									
28292	(PIECE NO:524001-0018,PIPE NO:5240-01-0018)																BTA	WT	548	640 676	52	86		BT HT		0	FV 147 136	488 162	466 155	464 154	100 100 100	100 100 100	95 95 95	95 95 95							
28293	(PIECE NO:524001-0027,PIPE NO:5240-01-0013)																WT						A																	
28290	P 5	32	158	10	2	1	2	38	14	3	0	1		26	0	1742																									
	(PIECE NO:524001-0027,PIPE NO:5240-01-0013)																																							

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
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注記 NOTES

注記 NOTES
[注1] 比：溶解分析 Heat Analysis, P：母材製品分析 Product Analysis(Base), W：溶接部製品分析 Product Analysis(Weld) [注2] B：母材 Base Metal, W：溶接部 Weld, H：熱影響部 HAZ [注3] L：縦方向 Longitudinal, T：横方向 Transverse [注4] GL：標点距離 Gauge Length, A:50mm, B:200mm, C:2", D:8", E:5.65/√So, F:4/√So [注5] G：合格, A:Acceptable [注6] 試験片寸法 Specimen Size, F:10×10mm, 7:10×7.5mm, 6:10×6.7mm, 5:10×5mm, 3:10×3..3mm, 2:10×2.5mm [注7] ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU [注8] AGS：オーステナイト粒度 Austenitic Grain Size, FGS：フェライト粒度 Ferritic Grain Size

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。
WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE TO THE APPLICABLE SPECIFICATION BY THE BASIC OXYGEN PROCESS AND YESSTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE API WITH SATISFACTORY RESULTS.

君津製鐵所 品質保証室
HEAD OF DEPARTMENT
QUALITY ASSURANCE DEPT.
KIMITSU WORKS

Lloyd's Register EMEA
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☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

お問合せ先 CONTACT ADDRESS：PIPE-IPP@JP.NSSMC.COM

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 1 MT 12,48 HEAT G13110 DIMENSIONS 762 x 29,6

TAL TUBI ACC.LOMB.SPA c/Socio Unico P.O. OF160312 SIDERPIGHI JOB N°16001536 OUR DDT N°16001557 OF 03/05/16
N° 1 MT 12,48 HEAT G13110 DIMENSIONS 762 x 29,6

Approved by QUALITY2 on 29/07/16

注文者 SHIPPER：NIPPON STEEL & SUMIKIN BUSSAN CORP.

注文書照合番号 REFERENCE No.：5263-ANY4060

契約番号 CONTRACT No.：4-841-N3-5-8-X001-01

品名 COMMODITY：SUBMERGED ARC LONGITUDINALLY WELDED STEEL LINE PIPE

規格 SPECIFICATION：API SPEC 5L GR.L450M PSL2 45TH EDITION, DEC.2012)

寸法 SIZE：762X29.6X11800

数量 QUANTITY：33 PCS

質量 MASS：NET 208.164KG

備考 NOTE：ORDER NO.ANY4060/NSE2014052 ACCORDING TO EN10204 3.1

鋼管検査証明書
INSPECTION CERTIFICATE

需要家 CUSTOMER：SIDERPIGHI S.P.A. CON SOCIO UNICO

需要家管理番号 CUSTOMERS CONTROL No.：

新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION
本社 HEAD OFFICE：〒100-8071 東京都千代田区丸の内二丁目6番1号 2-6-1, MARUNOUCHI CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS：〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF., 299-1141, JAPAN

証明書番号 CERTIFICATE No.：U-14090151　頁 PAGE：3E

発行年月日 DATE OF ISSUE：2014-09-18　FSM021 Q05

管理番号 CONTROL No.：524001（製造番号 PRODUCTION No.）

製品番号 HEAT NO. / 試験番号 TEST NO.	C	Si	Mn	P	S	Ni	Cu	Cr	Mo	Nb	V	Ti	TAl	TAL	B	TE	Ceq
	0.03	0.45	1.80	0.020	0.010	0.50	0.50	0.50	0.35	0.10	0.10	0.03	0.060		0.0020		0.43
					200PPM									PPM	PPM	T 2.50	
28291 P	5	32	156	10	2	1	2	38	14	3	0	1		25	0	1742	
(PIECE NO:524001-0016.PIPE NO:5240-01-0018)																	
G13254 H	5	32	156	10	2	2	1	38	13	3	0	1		30	0	1741	
28279	(PIECE NO:524001-0033.PIPE NO:5240-01-0004)																
28280	(PIECE NO:524001-0012.PIPE NO:5240-01-0005)																
28277 P	5	31	154	9	2	1	1	37	14	3	0	1		30	0	1741	
(PIECE NO:524001-0033.PIPE NO:5240-01-0004)																	
28278 P	5	31	153	9	2	1	1	37	13	3	0	1		31	0	1641	
(PIECE NO:524001-0012.PIPE NO:5240-01-0005)																	

引張試験 TENSILE TEST	LOCATION	ORIENTATION	降伏点 YS 0.5%	引張強さ TS	伸び EL.	降伏比 YR	BEND TEST RESULT
			MPA		%		
28291							
G13254							
28279	B	T	525	638	53	82	BT
	W	T		662			BT
28280	W	T					HT
28277							
28278							

衝撃試験 IMPACT TEST	LOCATION	NOTCH	TEST TEMP. °C	衝撃値 IMPACT VALUE 平均値 AVG	衝撃値 IMPACT VALUE 各々の値 EACH J	剪断破面率 SHEAR FRACTURE 平均値 AVG	剪断破面率 SHEAR FRACTURE 各々の値 EACH %
28291							
G13254							
28279	B	V	0	161	155, 167, 148, 150	100	100, 100, 100, 100
	W	V	0	157	181, 155, 135	92	100, 90, 85
28280	W	V	0	433	437, 430, 431	100	100, 100, 100
28277							
28278							

落重試験 DWTT 剪断破面率 SHEAR FRACTURE	平均値 AVG	各々の値 EACH %
28291		
G13254		
28279		
28280		
28277		
28278		

硬さ試験 HARDNESS TEST	LOCATION
28291	
G13254	
28279	
28280	
28277	
28278	

結晶粒度 GRAIN SIZE TEST	備考 REMARKS
28291	
G13254	
28279	
28280	
28277	
28278	

*** TYPE AND SIZE OF REFERENCE INDICATOR OR IMAGE QUALITY INDICATOR USED FOR NON-DESTRUCTIVE INSPECTION FOR WELD ***
UT: 3.2 MM (0.126 IN) DIAMETER THROUGH THICKNESS DRILLED HOLE
RT: WIRE-TYPE (ISO) IMAGE QUALITY INDICATOR

*** THE DATA PRESENTED WAS CONVERTED FROM THE MEASUREMENT SYSTEM USED FOR THE ORIGINAL INSPECTION ***

*** NAME AND LOCATION OF FACILITIES USED FOR PIPE MANUFACTURING, PLATE ROLLING AND STEEL MAKING ***
NIPPON STEEL & SUMITOMO METAL CORPORATION KIMITSU WORKS

その他試験 DESCRIPTION OF TEST	寸法・外観検査 VISUAL & DIMENSIONS INSPECTION	水圧試験 HYDROSTATIC TEST	非破壊検査 NON-DESTRUCTIVE INSPECTION
	ACCEPTABLE	20.5 MPA 10 SEC. ACCEPTABLE	UT, RT, MT ACCEPTABLE

REMARKS NOTES2

[1] H: 溶鋼分析 Heat Analysis, P: 母材製品分析 Product Analysis(Base), W: 溶接部製品分析 Product Analysis(Weld) [2] B: 母材 Base Metal, W: 溶接部 Weld, H: 熱影響部 HAZ [3] L: 縦方向 Longitudinal, T: 横方向 Transverse [4] GL: 径点距離 Gauge Length, A:50mm, B:200mm, C:2", D:2", E:5.65√So, F:4√So [5] G 合格, A:Acceptable [6] 試験片寸法 Specimen Size, F:10×10mm, 7:10×7.5mm, 8:10×6.7mm, 5:10×5mm, 3:10×3.3mm, 2:10×2.5mm [7] ノッチ形状 Notch Type, V:2mmV, U:2mmU, D:5mmU [8] AGS: オーステナイト粒度 Austenite Grain Size, FGS: フェライト粒度 Ferrite Grain Size

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Sandro Buscarini - Inspector
Milan Office

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 17,85 HEAT 51087 DIMENSIONS 508 x 25,4

COMMERCIALE TUBI ACCIAIO Viale Lidice 40-Grugliasco(TO)	Kg 5450	Mt 17,85	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 51087	Cta's job: OX0000662	Date: 27/07/2016
Customer : TAL SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	P.O. No.: PO: OF160541		Item:

Z-Group Steel Holding **divize Válcovny trub Chomutov**
Libušina 4778, Chomutov 430 01, Czech Republic www.vichomutov.cz

Inspekční certifikát
Abnahmenprüfzeugnis
Inspection Certificate
Certificat de Reception **EN 10204:2004/3.1**

Atest č. - Attest Nr.
Certificate No - Certificat No : **3489/15**

Objednávka č. - Bestell Nr.
Order No - No de la commande :
0713/15
Code : 1541274
Zakázka č. - Bestell Nr. - Order No - Commande No:
638895

Zákazník - Besteller - Customer - Client:
INCOS, s.r.o.
KARLOVO NAM.17/288
128 00 PRAHA 2
Czech Republic

Znak výrobce - Herstellerszeichen
Brand of the manufacture-Marque du fabricant:

Razítko znalce - Stempel des Sachverständigen
Inspector's stamp - Poincon de l'expert **TK7**

Ocelové bezešvé trubky - Nahtlose Stahlrohre - Seamless steel tubes - Tubes en aciers sans soudure
black, laquered

Pressure test

Úkosy - Beweled ends
beveled for welding 37.5° (±2,5°)/10°(±2,5°) with flat 1,6 mm with tol. -0/+0,8 mm

Technické požadavky - Prüfgrundlagen/Anforderugen - Technical requirements/Demand - Exigences techniques:
INCOS TS03R2 API Spec. 5L - 45 ed., july 1, 2013 PSL1 EN ISO 3183:2012 PSL1 ASTM A333/A333M - 13 ASME SA-333/SA-333M - 13 EN 10216-3:2002/A1:2004 TC1 PED 97/23/EC ANSI/NACE MR0175/ISO 15156:2009(E) appr. Dec.02, 2010 NACE MR 0103-2010 ASME B36.10-04

Materiál - Werkstoff - Material - Matiére:	Dle - Entsprechend - According to - Selon:	Vydání - Ausgabe - Edition - Edition:
X52	API 5L	2013
L360	API 5L	2013
GR.6	ASTM A 333	2013
X52	EN ISO 3183	2012
L360N	EN ISO 3183	2012
Gr.6	ASME SA 333	2013
P355NL1	EN 10216-3	2013

Stav dodávky - Lieferzustand - State of delivery - Etat de livraison:
Hot rolled - normalized 925 +/- 15 °C - cooled in air

Způsob zpracování tavby - Erschmelzungsart - Melting process - Procédé d´élaboration:
Electric steel - Fully killed - vacuum E+LF+VD

Značení - Kennzeichnung - Marking - Marquage:
Stencilled : logo VT API SPEC 5L 0286 API (9-2015) API 5L EN ISO 3183 ASTM/ASME A/SA 333 EN 10216-3 508,0 x 25,40 X52/L360 PSL1 Gr.6 P355NL1 TC1 + compliance with ASTM A 106 Gr.B/C SMLS HOT FINISHED HEAT No. (Heat no.) TESTED20,5 MPa (length) ... m (weight) ... kg LT-51 CZECH REPUBLIC Stamped with low stress stamps : (Heat no.)

Specifikace - Specification:

Rozsah dodávky - Umfang der Lieferung - Extent of material delivery - Liste descriptive

Kusy Stücke Pieces Pièces	Celková délka Gesamtlänge Total length Longueur totale [m]	Celková hmotnost Gesamtmasse Total mass Masse totale [t]	Rozměry Dimensionen Dimensions Dimensions [mm]	Tavba číslo Schmelze Nr. Heat No. No Coulée	Vodní tlak Druckprobe Hydr. Test Essai hydralique [MPa]	Avízo: Aviso: Advice: Avis:	Datum: Datum: Date: Date:
3	26,900	8,213	508,0 x 25,40 7 - 11 m	51087	20.500	15218515	28.09.2015

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Sandro Buscarini - Inspector
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Doplňující údaje - Zusätzliche - Additional remarks - Autres remarques:
Visual inspection and dimensional check without objection.
Closed plastic ends protectors.

Country of melt - Czech republic.
The Manufacturer declares that it is certified by the notified body TÜV NORD reg. No 0045 according to Article 4.3 Annex I of Directive 97/23 EC and AD-2000 Merkblatt W0 and EN 10210-1:2006 appendix to ZA CPR (EU) No. 305/2011.
Uvedané výrobky jsou ve shodě s předpisy, které jsou specifikovány kupní smlouvou. -Angegebene produkte sind in einklang mit den vorschriften, die im Kaufvertrag spezifiziert werden.We thereby declare that the above mentioned products were manufactured in accordance with specifications and contract requirements. - Des produits indiqués sont dans un accord avec les disposition contrait de vente on spécifie.
Raw material by used for pipe production is without radioactive contamination.

Z-Group Steel Holding, a.s.
IČ:000 11 380
D5 - válcovny trub
Libušina 4778, 430 01 Chomutov

Chomutov S. 29.09.2015
Dne - Datum - Date - Date

Příloha-Anlage-Annex-Annexe 1

Jana SOCHROVÁ
Zodpovědná osoba - Der Werkssachverständige - Inspector-le responsable

Approved by QUALITY2 on 29/07/16

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 17,85 HEAT 51087 DIMENSIONS 508 x 25,4

COMMERCIALE TUBI ACCIAIO Viale Lidice 40-Grugliasco(TO)	Kg 5450	Mt 17,85	Pz No.: 2
This document is reproduced by a computerized system and is conform to the original	Heat No.: 51087	Cta's job: OX0000662	Date: 27/07/2016
Customer : TAL SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	P.O. No.: PO: OF160541		Item:

Z-Group Steel Holding

divize Válcovny trub Chomutov
Libušina 4778, Chomutov 430 01, Czech Republic www.vtchomutov.cz

Příloha - Anlage - Annex - Annexe
2

Výsledky zkoušek - Ergebnis der Prüfungen - Test results - Résultats des tests

Atest č. - Attest Nr. - Certificate No - Certificat No : **3489/15** **29.09.2015**

Mechanické zkoušky-Mechanische Prüfungen-Mechanical tests-Tests méchaniques							ASTM A 370			ASTM A 370	
		Rozměry vzorku Probeabmessung Dim. of. Specimen Dim. de l'echantillion		Odběr vzorku Probenentnahme Specimen Prélevement	Mez kluzu Streck/Dehngrenze Yield strength/ Proof stress Limite d'elasticité	Pevnost v tahu Zugfestigkeit Tensile strength Résistence á la traction	Tažnost Bruchdehnung Elongation Allongement	Kontrakce Brucheinschnürung Reduction of area Contraction	Nárazová práce Schlagarbeit Energy of impact Energie de rupture	Vrub.Houževnatost Kerbschlagzähigkeit Impact strength Résilience
Č. zkoušky Probe Nr. Test No No du test	Číslo tavby Schmelze Nr. Heat No No coulée	Tloušťka Dicke Thickness Epaisseur "	Šíře Breite Width Largeur "	Směr Richtung Direction Direction	Zkuš. teplota Prüftemperatur Test temperature Temperature du test C°	Rt 0,5 MPa	Rm MPa	2" %	Z %	Kv J	J/cm2
16894	**51087**		**Ø1/2**	**L**	**20**	**374**	**538**	**33,40**	**100,00**		
16894	**51087**		**Ø1/2**	**L**	**20**	**376**	**536**	**34,00**	**100,00**		
16894	**51087**		**10 mm**	**L**	**-45**					**181**	
	51087				**-45**					**254**	
	51087				**-45**					**146**	
	51087									**A 194**	
16894	**51087**		**10 mm**	**L**	**-51**					**148**	
	51087				**-51**					**165**	
	51087				**-51**					**158**	
	51087									**A 157**	
16895	**51087**		**Ø10**	**L**	**20**	**361**	**530**	**33,00**			
16895	**51087**		**10,00**	**T**	**-45**					**82**	
	51087				**-45**					**83**	
	51087				**-45**					**107**	
	51087				**A**					**91**	
16894	**51087**		**10,00**	**L**	**-51**					**176**	
	51087				**-51**					**137**	
	51087				**-51**					**119**	
	51087				**A**					**144**	

L = Podél - Längs - Along - En longueur: T = Příčně = Quer = Transverse = En travers, A = Average

Technologické zkoušky - Technologische Prüfungen - Technological test - Test technologiques:
Hardness test < 22 HRC. Flattening test satisfied acc to ASTM A530/ASTM A999/EN ISO 8492. Performing a random check of residual remnant magnetism max. 30 Gauss.

Chemické složení - Chemische Zusammensetzung - Chemical composition - Composition chimique (%)

Tavba číslo Schmelze Nr. Heat No No Coulée	Heat analysis (S) / product analysis (K)																
	C	Mn	Si	P	S	Cr	Ni	Cu	Mo	V	Nb	Ti	Al	N	B	Cev	Co
51087S	**0,15**	**1,32**	**0,25**	**0,014**	**0,004**	**0,07**	**0,08**	**0,15**	**0,02**	**0,05**	**0,016**	**0,002**	**0,033**	**0,008**	**0,0001**	**0,41**	
51087K	**0,16**	**1,30**	**0,25**	**0,013**	**0,004**	**0,07**	**0,07**	**0,13**	**0,03**	**0,05**	**0,014**	**0,001**	**0,032**	**0,007**	**0,0002**	**0,42**	
51087K	**0,16**	**1,30**	**0,25**	**0,013**	**0,004**	**0,07**	**0,06**	**0,13**	**0,03**	**0,05**	**0,014**	**0,001**	**0,032**	**0,007**	**0,0002**	**0,42**	

Tough fracture portion: 100%, 100%, 100%

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Sandro Buscarini - Inspector
Milan Office
Lloyd's Register

Chomutov .S. 29.09.2015
Dne - Datum - Date - Date

Jana SOCHROVÁ
Zodpovědná osoba - Der Werkssachverständige - Inspecteur responsable

Z-Group Steel Holding a.s.
IČ: 000 11 380
DS - válcovny trub
Libušina 4778, 430 01 Chomutov

Approved by QUALITY2 on 29/07/16

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 7 MT 63,52 HEAT 868266 DIMENSIONS 355,6 x 12,7

ALCHEMIA S.A.
Zakład Huta Batory
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 5276/EXP/R/14

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2006 type 3.1
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/14/01017 **OF - 140385**	**4219039/15**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pièces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot Rolled seamless steel pipes acc.to API 5L - PSL1/12/ EN ISO 3183- PSL1/12/ ASTM A333/A333M/11/ A999/ A999M/11/ ASME SA 333/ SA999/ SEC.II.PART.A/10. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 900 ^{0}C/20'. Pipes hot finished > 850 ^{0} C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **14" x 0,500"** **(355,6 x 12,70 mm)** **7 - 11,8 m**	(B02) **6/X52/L360**	(B07) **868266**	(B08) **16**	(B15) **145,28**	(B13) **16008**

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Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG

(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
(B07) **868266** **control anal.**	0,15 0,16 0,16	1,25 1,28 1,25	0,21 0,21 0,20	0,010 0,011 0,010	0,005 0,007 0,004	0,06 0,07 0,07	0,08 0,08 0,08	0,13 0,14 0,13
	Al	**Mo**	**V**	**Ti**	**Nb**	**Ceq**		
	0,035 0,031 0,030	0,05 0,05 0,05	0,05 0,06 0,06	0,004 0,004 0,004	0,000 0,000 0,000	0,40 0,43 0,42		

Approved by QUALITY1 on 13/01/15

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No № плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 30,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 °C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/03 AN.A.P.A.2.1.2 and NACE MR 0103/05 P.2.1 MAX 22HRC/237HB (C30)	°C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" **868266/25950 L**	**376**	**521**	**41,5**		**100% Shear area** **222 - 198 - 219**	**213**	**158 HB** **154 HB**	
868266/25951	**396**	**532**	**40,7**					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Manufacturer has Quality Management System accordance with Directive 97/23/EC (PED) – Annex I – par. 4.3 –TÜV Nord, Certificate No 07-203-9120 WZ-0888/13, Certificate No 07-202-9120 WZ-0888/13 and ISO 9001/TUV Certificate No 04100 950250.

(Z01)**Powierzchnię i wymiary zbadano w 100%** - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 / ISO 3183/ L360/ PSL1/A333/ SA333 / 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI Halina Rehmet	KIEROWNIK Działu Kontroli Jakości i Technologii Grzegorz Datta	**dn. 15.12. 2014 r.**

5276/EXP/R/14

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

Approved by QUALITY1 on 13/01/15

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TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 23,44 HEAT 49921 DIMENSIONS 273 x 15,88

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

Page 1/3
B 3027/1
31.01.2014

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
3.530 tons - lbs	35.06 meters - feets	3	-

Standard: API 5L ED.45/2012 - PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2011; ASME SA 333/SA 333M-2013; TS 02 REV.05/24.01.2012 withdeviations as per our. TO No.4/2.10.2013; ASME B16.25/2012; NACE MR 0175/ISO 15156-1&2-2009; NACE MR 0103-2012;

Buyer's reference PO NO. : OF-130305

Contract 50001435

Dimensions: 273.00 x 15.88 mm | Schedule: - | Length: 10.00 - 11.80 m | -

Item	Item Client
10	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: 6 / X52 / L360

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B
			Max	0.20	1.30	0.35	0.010	0.020	0.20	0.40	0.30	0.060	0.12	0.080	0.020	0.040	0.0010
			Min	-	-	0.15	-	-	-	-	-	0.015	-	0.060	-	-	-
49921		Heat analysis		0.15	1.20	0.29	0.004	0.009	0.04	0.10	0.17	0.027	0.02	0.060	0.000	0.001	0.0004
49921	14-185	Product analysis		0.14	1.23	0.24	0.003	0.006	0.05	0.09	0.15	0.035	0.02	0.061	0.002	0.000	0.0000
49921	14-185	Product analysis		0.14	1.23	0.23	0.003	0.006	0.05	0.09	0.15	0.036	0.02	0.060	0.002	0.000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW
			Max	0.100	0.150	0.600	0.42
			Min	-	-	-	-
49921		Heat analysis		0.060	0.061	0.291	0.39
49921	14-185	Product analysis		0.063	0.063	0.283	0.39
49921	14-185	Product analysis		0.062	0.062	0.282	0.39

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
49921	Longitudinal Flat	50.8	-	38.10	-	15.10	-	575.3	-	14-396	391.00	-	536.00	-	56.80	0.73
49921	Transversal Flat	50.8	-	38.10	-	15.90	-	605.8	-	14-256B	439.00	-	551.00	-	41.50	0.80
49921	Transversal Flat	50.8	-	38.10	-	15.60	-	594.4	-	14-256B	430.00	-	549.00	-	40.90	0.78

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

Formular 12A, rev.9

Approved by Quality Dept. on 31/12/2014

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 23,44 HEAT 49921 DIMENSIONS 273 x 15,88

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004	Page 2/3 B 3027/1 31.01.2014	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 3.530 tons - lbs	Total Length: 35.06 meters - feets	Pieces: 3	Bundles: -

Buyer's reference: PO NO. : OF-130305	**Standard:** API 5L ED.45/2012 - PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2011; ASME SA 333/SA 333M-2013; TS 02 REV.05/24.01.2012 withdeviations as per our. TO No.4/2.10.2013; ASME B16.25/2012; NACE MR 0175/ISO 15156-1&2-2009; NACE MR 0103-2012;
Contract 50001435	Dimensions: 273.00 x 15.88 mm - Schedule: - Length: 10.00 - 11.80 m - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: 6 / X52 / L360 -
10	-		205	-	20.5	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
49921	14-669	Longitudinal	10x10x55	-50	27.0	164	202	255	40.0	207	-	-	-	95	100	100	1.66	1.73	1.81
49921	14-670	Longitudinal	10x10x55	-45	14.0	267	265	295	18.0	276	-	-	-	100	100	100	1.76	1.72	1.89

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
49921	14-277	-	-	-	-	-	-	-	<22
49921	14-277	-	-	-	-	-	-	-	<22

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
49921	14-276	OK
49921	14-276	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
49921	3	35.06	3530

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. Romania

Lloyd's Register EMEA
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Witnessed Monitored Reviewed
Sandro Buscarini - Inspector
Milan Office

Formular 12A, rev.9

Approved by Quality Dept. on 31/12/2014

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 2 MT 23,44 HEAT 49921 DIMENSIONS 273 x 15,88

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004	Page 3/3 B 3027/1 31.01.2014	ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 3.530 tons - lbs	Total Length: 35.06 meters - feets	Pieces 3	Bundles -
Buyer's reference	PO NO. : OF-130305	**Standard:** API 5L ED.45/2012 - PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2011; ASME SA 333/SA 333M-2013; TS 02 REV.05/24.01.2012 withdeviations as per our. TO No.4/2.10.2013; ASME B16.25/2012; NACE MR 0175/ISO 15156-1&2-2009; NACE MR 0103-2012;				
Contract	50001435	Dimensions: 273.00 x 15.88 mm -	Schedule: -	Length: 10.00 - 11.80 m	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: 6 / X52 / L360 -
10	-		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH P.E.D. 97/23/EC/29.05.1997, ANNEX 1, SECTION 4.3
Hot finished, steel is fully killed and produced by electric furnace, Arcelor Mittal Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara .
Steel is fully killed with a fine grain practice , size min.7.
Heat treatment : normalizing at temperature of 880 °C - time soaking 35 min.
Visual inspection and dimensional check without objection.
Magnetism residual max.30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

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☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office
Lloyd's Register

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal S27 Roman România

Formular 12A, rev.9

Approved by Quality Dept. on 31/12/2014

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 4 MT 32,63 HEAT 849228 DIMENSIONS 273 x 12,7

HUTA BATORY
Sp. z o.o.
UL. Dyrekcyjna 6
41-506 Chorzów
POLAND

ŚWIADECTWO ODBIORU No 845/EXP/R/10

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ
Acc.to EN 10204:2006 type 3.1
/pr normy/

Zamawiający T.A.L.
Le client-Ordered by-Besteller-Заказчик

Adres wysyłkowy
Adresse-Address-Versandadresse-Адрес получателя

Nr i data zamówienia klienta No et date la commande Order No and date No und Datum der Bestellung No и число заказа	Nr zlecenia Ordre No Manuf. Order No Auftrag No No наряда	Nr awizu Avis No Advice No Versandanzeige No No извещения	Nr wagonu Wagen No Car No Wagon No No вагона
PL/278038725/10/0137 OF - 100026	4319567/10		

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Przedmiot i wykonanie (stan obr. Termicz.,miech. Itp.) L'objet et l'execution (traitement thermique et l'usinage) Item and specification (Heat and mechanical treatment etc.) Gegenstand und Ausführung (therm und mechan. Bearbeitung usw.) Предмет и исполнение (состояние терм. и механобраб. и пр.)	Wymiar lub rysunek Dimensions ou dessin Dimesions or drawing Abmessung oder Zeichnung Размер чертеж	Marka Marque Steel type Marke Марка	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb. ft (c. mtr.) c. mtr. l. M. пог. м	Kg lb (kg) кг
Seamless steel pipes acc.to API 5L - PSL1/2007/ASTM A106/ A106M/08/ASME SA106/07/ ASTM A333/A333M/05/ASME SA333/SEC.II.Part.A/07. Outside diameter tolerances +/- 0,75 %. Bevelled ends acc.to API - 5L. Outside surface lacquered. Normalized.	10,750" x 0,500" (273 x 12,70 mm) 6 - 9 m	C/6/X52	849228	22	186,63	15830

Lloyd's Register EMEA
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☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office
Lloyd's Register

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécuté par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - ANALYSE CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
849228	0,15	1,24	0,23	0,012	0,005	0,09	0,08	0,15
control anal.	0,17	1,26	0,23	0,012	0,005	0,09	0,08	0,15
	0,17	1,25	0,23	0,011	0,005	0,09	0,08	0,15
	Al	Mo	V	Nb	Ti	Ceq		
	0,033	0,04	0,05	0,000	0,003	0,41		
	0,029	0,04	0,05	0,000	0,003	0,43		
	0,030	0,04	0,05	0,000	0,003	0,43		

Approved by Quality Dept. on 31/12/2014

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 4 MT 32,63 HEAT 849228 DIMENSIONS 273 x 12,7

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No № плавки или пробы	Stan obróbki Termicznej Traitement thermique Heat treatement Therm. Bearbeitung Термич. обработка	Re MPa min 360	Rm MPa min 485	A 2" % min 30,0	Z %	U KV -50 °C acc.to ASTM E23 min 27 J	Twardość Dureté Hardness Härte Твердость MAX 22 HRC/237HB acc.to NACE MR0175/ISO 15156-2/03 AN.A.P.A.2.1.2
849228/4150		389	544	39,4		MIXED AREA 140 - 108 - 84 J	165 HB
849228/4151 L		376	545	41,9			167 HB

3. BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCH PRÜFUNGEN

Flattening test - positive results

4. BADANIA METALOGRAFICZNE – ESSAIS METALLOGRAPHIQUES – METALLOGRAPHIC TESTS – METALLOGRAPHISCHE UNTERSUCHUNGEN – МЕТАЛЛОГРАФИЧЕСКИЕ ИСПЫТАНИЯ

5. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results time 5 s

6. UWAGI DODATKOWE – ADDITIONAL REMARKS – AUTRESOBSERVATIONS – ANDERE BEMERUNGEN

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100%

Materiał oznaczono –
La material est marqué – Material marked – Das Material wurde bezeichnet – Материал обозначен
Acc.to API 5L / X52/ PSL 1 / A 106/ SA106/ C/ A333/ SA333 / 6.

Na podstawie wyżej przeprowadzonych prób materiał zwolniono – Sur la base des essais si-dessus le material est délivré
According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеизложенных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	Dyrekcja Huty Direction de l'Usine Works Management Hütten - Direktion Дирекция Завода	Lloyd's Register EMEA A member of the Lloyd's Register group ☐ Witnessed ☐ Monitored ☒ Reviewed Sandro Buscarini - Inspector Milan Office
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI HALINA REHMET	KIEROWNIK DZIAŁU KONTROLI JAKOŚCI I TECHNOLOGII inż HENRYK JONDERKO	dn. 19.02. 2010 r.

Approved by Quality Dept. on 31/12/2014

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ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 10 MT 81,57 HEAT 848736 DIMENSIONS 273 x 12,7

HUTA BATORY
Sp. z o.o.
UL. Dyrekcyjna 6
41-506 Chorzów
POLAND

ŚWIADECTWO ODBIORU № 843/EXP/R/10

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ
Acc.to EN 10204:2006 type 3.1
/nr normy/

Zamawiający T.A.L.
Le client-Ordered by-Besteller-Заказчик

Adres wysyłkowy
Adresse-Address-Versandadresse-Адрес получателя

Nr i data zamówienia klienta No et date la commande Order No and date No und Datum der Bestellung № и число заказа	Nr zlecenia Ordre No Manuf. Order No Auftrag No № наряда	Nr awizu Avis No Advice No Versandanzeige No № извещения	Nr wagonu Wagen No Car No Wagon No № вагона
PL/278038725/10/0137 OF - 100026	4319567/10		

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Przedmiot i wykonanie (stan obr. Termicz.,mech. itp.) L'objet et l'execution (traitement thermique et l'usinage) Item and specification (Heat and mechanical treatment etc.) Gegenstand und Ausführung (therm und mechan. Bearbeitung usw.) Предмет и исполнение (состояние терм. и механобраб. и пр.)	Wymiar lub rysunek Dimensions ou dessin Dimesions or drawing Abmessung oder Zeichnung Размер чертеж	Marka Marque Steel type Marke Марка	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb. ft (c. mtr.) c. mtr. l. M. пог. м	Kg lb (kg) кг
Seamless steel pipes acc.to API 5L - PSL1/2007/ASTM A106/ A106M/08/ASME SA106/07/ ASTM A333/A333M/05/ASME SA333/SEC.II.Part.A/07. Outside diameter tolerances +/- 0,75 %. Bevelled ends acc.to API - 5L. Outside surface lacquered. Normalized.	10,750" x 0,500" (273 x 12,70 mm) 6 - 9 m	C/6/X52	848736	24	197,00	16352

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа прошел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - ANALYSE CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
848736	0,16	1,25	0,29	0,009	0,003	0,08	0,09	0,18
control anal.	0,17	1,28	0,29	0,009	0,004	0,08	0,08	0,19
	0,17	1,28	0,29	0,009	0,004	0,08	0,08	0,18
	Al	Mo	V	Nb	Ti	Ceq		
	0,050	0,05	0,06	0,000	0,004	0,42		
	0,052	0,05	0,06	0,000	0,004	0,44		
	0,053	0,05	0,06	0,000	0,004	0,44		

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☑ Reviewed
Sandro Buscarini - Inspector
Milan Office

Approved by Quality Dept. on 31/12/2014

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Stan obróbki Termicznej Traitement thermique Heat treatement Therm. Bearbeitung Термич. обработка	Re MPa min 360	Rm MPa min 485	A 2" % min 30,0	Z %	U KV -50 °C acc.to ASTM E23 min 27 J	Twardość Dureté Hardness Härte Твердость MAX 22 HRC/237HB acc.to NACE MRO175/ISO 15156-2/03 AN.A.P.A.2.1.2
848736/4137		397	574	43,1		MIXED AREA 136 - 102 - 152 J	167 HB 170 HB
848736/4138		409	570	41,7			
L							

3. BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCH PRÜFUNGEN

Flattening test - positive results

4. BADANIA METALOGRAFICZNE – ESSAIS METALLOGRAPHIQUES – METALLOGRAPHIC TESTS – METALLOGRAPHISCHE UNTERSUCHUNGEN – МЕТАЛЛОГРАФИЧЕСКИЕ ИСПЫТАНИЯ

5. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results time 5 s

6. UWAGI DODATKOWE – ADDITIONAL REMARKS – AUTRESOBSERVATIONS – ANDERE BEMERUNGEN

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100%

Material oznaczono –
La material est marqué – Material marked – Das Material wurde bezeichnet – Материал обозначен
Acc.to API 5L / X52/ PSL 1 / A 106/ SA106/ C/ A333/ SA333 / 6.

Na podstawie wyżej przeprowadzonych prób materiał zwolniono – Sur la base des essais si-dessus le material est délivré
According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	Dyrekcja Huty Direction de l'Usine Works Management Hütten - Direktion Дирекция Завода	
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI HALINA REHMET	KIEROWNIK DZIAŁU KONTROLI JAKOŚCI I TECHNOLOGII inż HENRYK JONDERKO	Lloyd's Register EMEA A member of the Lloyd's Register group ☐ Witnessed ☐ Monitored ☒ Reviewed Sandro Buscarini - Inspector Milan Office dn. 04.03. 2010 r.

KJ 21634

Approved by Quality Dept. on 31/12/2014

alchemia SA

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU № 2329/EXP/R/16

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2006 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer № заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/16/00478 **OF - 160328**	**4329097/16**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/12/ EN ISO 3183- PSL1/12/ ASTM A333/A333M/15/ A999/ A999M/14/ ASME SA 333/ SA999/ SEC.II.PART.A/13. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 910 ^{0}C/20'. Pipes hot finished > 850 ^{0} C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **10,750" x 0,500"** **(273 x 12,70 mm)** **10 - 11,8 m**	(B02) **6/X52/L360**	(B07) **872796**	(B08) **5**	(B15) **57,80**	(B13) **4799**

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Sandro Buscarini - Inspector
Milan Office

Lloyd's Register

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **872796** **control anal.**	0,14 0,16 0,14	1,29 1,27 1,28	0,19 0,20 0,21	0,009 0,008 0,008	0,003 0,003 0,003	0,08 0,07 0,07	0,08 0,08 0,08	0,15 0,14 0,14
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
	0,038 0,032 0,033	0,05 0,05 0,05	0,06 0,06 0,06	0,003 0,004 0,004	0,000 0,000 0,000	0,011 0,013 0,013	0,41 0,41 0,41	

Approved by AAIMI on 23/05/16

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No № плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 30,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 °C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/03 AN.A.P. 2.1.2 and NACE MR 0103/05 P.2.1 MAX 22HRC/237HB (C30)	°C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 872796/10881 L	363	522	39,7		100% Shear area 260 - 258 - 262	260	156 HB 158 HB	
872796/10882	390	547	40,1					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99)
Guarantee grain size acc.to ASTM E 112 min. 8.
(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Manufacturer has Quality Management System accordance with Directive 97/23/EC (PED) – Annex I – par. 4.3 –TÜV Nord, Certificate No 07-203-9120 WP-2081/16 and Certificate No 07-202-9120 WZ-2081/16 and ISO 9001/TUV Certificate No 04100 950250.

(Z01)**Powierzchnię i wymiary zbadano w 100%** - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5L / X52/ PSL 1 / ISO 3183/ L360/ PSL1/A333/ SA333 / 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний поставка годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02) Lloyd's Register EMEA A member of the Lloyd's Register group ☐ Witnessed ☐ Monitored ☒ Reviewed Sandro Buscarini - Inspector Milan Office
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI Halina Rehmet	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 13.05. 2016 r.

2329/EXP/R/16

Approved by AAIMI on 23/05/16

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 1 MT 11,67 HEAT 44044 DIMENSIONS 219,1 x 12,7

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/3
B 8814/1
30.04.2016

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.733 tons - lbs	196.99 meters - feets	17	3

Standard: API 5L ED.45-2012-PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2015; ASME SA 333/SA 333M-2015; ASTM A 999/A 999M-2014; TS 02 REV.05/24.01.2012 with deviations as per our. TO No.4/2.10.2013; ASME B16.25-2012; NACE MR 0175/ISO 15156-1&2-2015; NACE MR 0103/2012

Buyer's reference: PO NO. : OF-160236

Contract 50002600

Dimensions: 219.10 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
11	120

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52/Gr6/L360
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B
			Max	0.20	1.30	0.35	0.010	0.020	0.20	0.40	0.30	0.060	0.12	0.080	0.020	0.040	0.0010
			Min	-	-	0.15	-	-	-	-	-	0.015	-	0.060	-	-	-
44044		Heat analysis		0.15	1.25	0.27	0.005	0.019	0.10	0.11	0.13	0.030	0.02	0.060	0.000	0.000	0.0000
44044	16-529	Product analysis		0.14	1.20	0.27	0.004	0.010	0.14	0.10	0.10	0.027	0.04	0.060	0.002	0.000	0.0000
44044	16-529	Product analysis		0.14	1.20	0.28	0.003	0.009	0.15	0.10	0.10	0.028	0.04	0.060	0.002	0.000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW
			Max	0.100	0.150	0.600	0.42
			Min	-	-	-	-
44044		Heat analysis		0.060	0.060	0.310	0.41
44044	16-529	Product analysis		0.062	0.062	0.342	0.40
44044	16-529	Product analysis		0.062	0.062	0.352	0.40

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
44044	Longitudinal Flat	50.8	-	40.00	-	12.70	-	508.0	-	16-1035	400.00	-	534.00	-	42.90	0.75
44044	Longitudinal Flat	50.8	-	40.00	-	13.10	-	524.0	-	16-1035	397.00	-	537.00	-	44.50	0.74

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Lloyd's Register EMEA
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☐ Witnessed ☐ Monitored ☑ Reviewed
Sandro Buscarini - Inspector
Milan Office

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 04/05/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 1 MT 11,67 HEAT 44044 DIMENSIONS 219,1 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 2/3 **B 8814/1** **30.04.2016**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 12.733 tons - lbs	Total Length: 196.99 meters - feets	Pieces 17 / Bundles 3

Standard: API 5L ED.45-2012-PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2015; ASME SA 333/SA 333M-2015; ASTM A 999/A 999M-2014; TS 02 REV.05/24.01.2012 with deviations as per our. TO No.4/2.10.2013; ASME B16.25-2012; NACE MR 0175/ISO 15156-1&2-2015; NACE MR 0103/2012

Buyer's reference PO NO. : OF-160236	Dimensions: 219.10 x 12.70 mm -	Schedule: XS/80	Length: 10.00 - 11.80 m - / - -
Contract 50002600			

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52/Gr6/L360 -
11	120		205	-	20.5	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
44044	16-1900	Longitudinal	10x10x55	-50	27.0	286	313	332	40.0	310	-	-	-	100	100	100	2.24	2.29	2.30
44044	16-1901	Longitudinal	10x10x55	-45	14.0	331	301	351	18.0	328	-	-	-	100	100	100	2.31	2.29	2.33

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
44044	16-804	-	-	-	-	-	-	-	<22
44044	16-804	-	-	-	-	-	-	-	<22

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
44044	16-1435	OK
44044	16-1435	OK

Heat	Pieces	Length (m)	Weight (kg)
44044	17	196.99	12733

Heat

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☑ Reviewed
Sandro Buscarini - Inspector
Milan Office

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 04/05/16

ROSETTI MARINO S.P.A. P.O.1716001444 116A80A TAL JOB N°316001816
N° 1 MT 11,67 HEAT 44044 DIMENSIONS 219,1 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -			Page 3/3	B 8814/1	30.04.2016
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES			Total weight: 12.733 tons - lbs	Total Length: 196.99 meters - feets	Pieces 17	Bundles 3
Buyer's reference PO NO. : OF-160236	**Standard:** API 5L ED.45-2012-PSL 1; ISO 3183-2012; ASTM A 333/A 333M-2015; ASME SA 333/SA 333M-2015; ASTM A 999/A 999M-2014; TS 02 REV.05/24.01.2012 with deviations as per our. TO No.4/2.10.2013; ASME B16.25-2012; NACE MR 0175/ISO 15156-1&2-2015; NACE MR 0103/2012					
Contract 50002600	Dimensions: 219.10 x 12.70 mm -	Schedule: XS/80		Length: 10.00 - 11.80 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52/Gr6/L360 -
11	120		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH P.E.D. 97/23/EC/29.05.1997, ANNEX 1, SECTION 4.3
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace, source G001595.
Steel is fully killed with a fine grain practice , size min.7.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890°C - 920°C time soaking 9 min .
Magnetism residual max.30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

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☐ Witnessed ☐ Monitored ☑ Reviewed
Sandro Buscarini - Inspector
Milan Office
Lloyd's Register

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 04/05/16

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

MANUAL UT REPORT

N° 160084-001

Date: 29/07/2016

Pag:1/1

Client: Tubi Acciaio Lombarda	**Order:** 1716001444 116A80A	**Job:** 316001816	**COMM.:** 160083
Subclient: Rosetti Marino SpA	**Phase/Activity:** Manual UT	**Material:** API 5L X52	
Location: Fiorenzuola (PC)	**Procedure:** IL73-140001-XUT	**Specification:** ASTM E 213	

Equipment: GE USM GO SR: 11105139

Probes: MWB 45-N4 8x9 SN: 53475

Calibration Blocks: TAL blocks provided & V1

Reference point echo: Notch 12.5%

Surface testing coverage: 100%

Item	dB ref	Heat N°	W.T. (mm)	Φ (mm)	Quantity	Length tot. (m)	Indication			Evaluation
							Longitudinal Position	Axial Position	Max Echo	
1	45	51087	25,40	508	2	17,85	/	/	/	Acceptable
2	48	868266	12,70	355,6	7	63,52	/	/	/	Acceptable
3	51	49921	15,88	273	2	23,44	/	/	/	Acceptable
4	49	872796	12,70	273	4	46,22	/	/	/	Acceptable

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Sandro Buscarini - Inspector
Milan Office
Lloyd's Register

Signatures:

ECOGLOBAL (Level II°) ISO 9712 MT PT UT VT

Name: La Rosa Michele Signature: Date: 20/07/2016

Client Name: Signature: Date:

Subclient Name: Signature: Date:

DISTRIBUTION

Original: Subclient

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MANUAL UT REPORT

N° 160084-002

Date: 29/07/2016

Pag:1/1

Client: Tubi Acciaio Lombarda	**Order:** 1716001444 116A80A	**Job:** 316001816	**COMM.:** 160083
Subclient: Rosetti Marino SpA	**Phase/Activity:** Manual UT	**Material:** API 5L X52	
Location: Fiorenzuola (PC)	**Procedure:** IL73-140001-XUT	**Specification:** ASTM E 213	

Equipment: GE USM GO SR: 11105139

Probes: MWB 45-N4 8x9 SN: 53475

Calibration Blocks: TAL blocks provided & V1

Reference point echo: Notch 12.5%

Surface testing coverage: 100%

Item	dB ref	Heat N°	W.T. (mm)	Φ (mm)	Quantity	Length tot. (m)	Indication			Evaluation
							Longitudinal Position	Axial Position	Max Echo	
1	49	848736	12,70	273	10	81,57	/	/	/	Acceptable
2	49	849228	12,70	273	4	32,63	/	/	/	Acceptable
3	44	44044	12,70	219,1	1	11,67	/	/	/	Acceptable

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Sandro Buscarini - Inspector
Milan Office

Signatures:

ECOGLOBAL (Level II°) ISO 9712 MT PT UT VT

Name: Gabetti Giovanni Signature: Date: 20/07/2016

Client Name: Signature: Date:

Subclient Name: Signature: Date:

DISTRIBUTION

Original: Subclient

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SIDER TEST S.r.l
Laboratorio Prove e Collaudi Controlli Non Distruttivi
Mechanical and Chemical Laboratory Non Destructive Test

RAPPORTO DI PROVA
TEST REPORT
PM 21995 / 16 Page 1 of 2
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 B / B

Sede legale ed amministrativa:
Strada della Barianella, 1/B - I-29015 Castel San Giovanni (PC)
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Tel.+39 0523 881.900 Fax+39 0523 842.903
http:\\www.sidertest.it sidertest@sidertest.it

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine / *Order* **1716001444 116A40A**	Commessa / *Job*	**316001816**
Subcliente/Subcustomer **ROSETTI MARINO SPA**			

Descrizione / *Description* **PIPE 762 x 29.6 mm**	Quantità / *Quantity* **24.51 m**	Posizione / *Item*	Prova Nr. / *Test. Nr.* **816/1/A**	Colata / *Heat* **G12219**	Materiale / *Material*	**API 5L:2013 Gr. X65 PSL2**	

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — *Tensile test*

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo / *Lo*	Posizione di prelievo / *Test position*	Temp. / *Temp. (°C)*	Snervamento / *Yield strength* (MPa)		Rottura / *Tensile strength* Rm (MPa)	Allungamento / *Elongation* A (%)	Strizione / *Area Reduction* Z (%)	S/R / *Ratio Yield strength / Tensile strength*	Data esecuzione / *Date of Testing*
816/1/A	105907	ASTM A 370-14 (Tension Test)	12,52	50,00	B T 1/2	23	(450÷600)	Rt0,5% **540**	(535÷760) **590**	(≥ 17,8) **25,2**		(≤ 0,93) **0,92**	02/08/2016
Specifica / *Specification:* **Material Standard**			**Note /*Remarks:***						**Esito delle prove / *Conclusion:***		**Conforme a 'Specifica' / Compliant with 'Specification'**		
816/1/A	105908	ASME IX QW-150 (2015)	26,10 19,01		W T FT	23			(535÷760) **638**				02/08/2016
Specifica / *Specification:* **Material Standard**			**Note /*Remarks:*** **Broken out of weld.**						**Esito delle prove / *Conclusion:***		**Conforme a 'Specifica' / Compliant with 'Specification'**		

PROVA DI RESILIENZA — *Notched-bar impact test*

Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni / *Dimension Size Width Length*	Posizione di prelievo / *Test position*	Tipo / *Type*	Temp. / *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo / Single Value*				*Media / Average*	Area di taglio / Shear area *Valore singolo (%) / Single Value (%)*	*Media (%) / Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) / Single Value (mm)*	*Media (mm) / Average (mm)*	Data esecuzione / *Date of Testing*
816/1/A	105909	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0)	**295,8**	**287,8**	**295,1**	≥ 50,0 **292,9**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**			**Note /*Remarks:***									**Esito delle prove / *Conclusion:***		**Conforme a 'Specifica' / Compliant with 'Specification'**		
816/1/A	105910	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	H T 1/2	KV	0	J (≥ 35,0)	**89,6**	**216,6**	**285,4**	≥ 50,0 **197,2**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**			**Note /*Remarks:***									**Esito delle prove / *Conclusion:***		**Conforme a 'Specifica' / Compliant with 'Specification'**		
816/1/A	105911	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	W T 1/2	KV	0	J (≥ 35,0)	**174,6**	**191,7**	**183,5**	≥ 50,0 **183,3**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**			**Note /*Remarks:***									**Esito delle prove / *Conclusion:***		**Conforme a 'Specifica' / Compliant with 'Specification'**		

PROVA DI PIEGA — *Bend test*

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method* NO DIE FORMER	Dimensioni *Wth. Length Width (mm)*	Posizione di prelievo / *Test position*	Q.tà / *Q.ty*	Temp. / *Temp. (°C)*	Angolo / *Angle (°)*	Ø mandrino / *Ø Former Wth. Ø*	Dist. appoggi / *Dist. rollers (mm)*	Lubrificante / *Lubricant*	Imperfezioni osservate / *Imperfections observed* Tipo / *Type*	Q.tà / *Q.ty*	Dimensioni / *Dimensions*	Posizione / *Location*	Data esecuzione / *Date of Testing*
816/1/A	* 105912	API 5L 45th Ed. (2012)	18,0 220 38,0	W TFBB FT	1	23	180	≤ x 18,0 100	139,2	Grafite	No cracks are visible without the use of magnifying aids.	0			02/08/2016

Specifica / *Specification:* **Order Reqs.1** **Note /*Remarks:*** **Esito delle prove / *Result of tests:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova. *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*
d) Il campionamento dei provini viene eseguito dal Cliente. *d) Clients are in charge of sampling.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intradus) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Milan Office
Lloyd's Register Inspector

Data Ingresso Materiale / *Date of Material Arrival*	Data Rapporto di prova / *Test Report Date*	Ispettore / *Inspector*	Cliente / *Customer*	Cliente / *Customer*	Responsabile di Reparto / *Department Manager*	Responsabile Laboratorio / *Laboratory Manager*
29/07/2016	**02/08/2016**				***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

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Mechanical and Chemical Laboratory Non Destructive Test

RAPPORTO DI PROVA
TEST REPORT
PM 21995 / 16 Page 2 of 2
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 B / B

Sede legale ed amministrativa:
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Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**
Subcliente/Subcustomer **ROSETTI MARINO SPA**

Ordine / *Order*: **1716001444 116A40A**

Commessa / *Job*: **316001816**

816/1/A	* 105913	API 5L 45th Ed. (2012)	18,0	220	38,0	W	TRBB	FT	1	23	180	≤ x	18,0	100	139,2	Grafite	No cracks are visible without the use of magnifying aids.	0	02/08/2016

Specifica / *Specification:* **Order Reqs.1** **Note** /*Remarks:* **Esito delle prove** /*Result of tests:* **Conforme a 'Specifica' / Compliant with 'Specification'**

Butt weld: SBB Transverse side, TFBB Tranverse face, TRBB Tranverse root, LFBB Longitudinal face, LRBB Longitudinal root. Cladding without butt weld: FBC Face, SBC Side. Cladding with butt weld: FBCB Face, SBCB Side.

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta *b) We declare that this test report cannot be partially reproduced without our written approval.*
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova *c) Compliance with documents in "Specification" refers only to the tests described on this test report.*
d) Il campionamento dei provini viene eseguito dal Cliente. *d) Sampling of specimens is carried out by Customer in charge of supply.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Sandro Buscarini - Inspector
Milan Office

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Ispettore *Inspector*	Ispettore *Inspector*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**					***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRP dt. 27/09/2013

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. ***Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.***

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RAPPORTO DI PROVA
TEST REPORT
PM 21996 / 16 Page 1 of 2
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 B / B

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Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**
Subcliente/Subcustomer **ROSETTI MARINO SPA**
Ordine / *Order* **1716001444 116A40A**
Commessa / *Job* **316001816**

Descrizione / *Description* **PIPE 762 x 29.6 mm**
Quantità / *Quantity* **12.48 m**
Posizione / *Item*
Prova Nr. / *Test. Nr.* **816/1/B**
Colata / *Heat* **G13110**
Materiale / *Material* **API 5L:2013 Gr. X65 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — *Tensile test*

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *Wth Ø / Width ØPipe* (mm)	Lo / *Lo*	Posizione di prelievo / *Test position*	Temp. / *Temp.* (°C)	Snervamento / *Yield strength* (MPa)		Rottura / *Tensile strength* Rm (MPa)	Allungamento / *Elongation* A (%)	Strizione / *Area Reduction* Z (%)	S/R / *Ratio Yield strength / Tensile strength*	Data esecuzione / *Date of Testing*
816/1/B	105914	ASTM A 370-14 (Tension Test)	12,53	50,00	B T 1/2	23	(450÷600)	Rt0,5% **537**	(535÷760) **590**	(≥ 17,8) **29,0**		(≤ 0,93) **0,91**	02/08/2016
Specifica / *Specification:* **Material Standard**					**Note / *Remarks:***				**Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**				
816/1/B	105915	ASME IX QW-150 (2015)	27,88 19,03		W T FT	23			(535÷760) **637**				02/08/2016
Specifica / *Specification:* **Material Standard**					**Note / *Remarks:*** **Broken out of weld.**				**Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**				

PROVA DI RESILIENZA — *Notched-bar impact test*

Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni / *Dimension* Size Width Length	Posizione di prelievo / *Test position*	Tipo / *Type*	Temp / *Temp.* (°C)	Energia assorbita / Absorbed energy — *Valore singolo / Single Value*	*Media / Average*	Area di taglio / Shear area — *Valore singolo (%) / Single Value (%)*	*Media (%) / Average (%)*	Espansione laterale / Lateral expansion — *Valore singolo (mm) / Single Value (mm)*	*Media (mm) / Average (mm)*	Data esecuzione / *Date of Testing*
816/1/B	105916	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0) **282,5 270,1 277,8**	(≥ 50,0) **276,8**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**				**Note / *Remarks:***					**Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**				
816/1/B	105917	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	H T 1/2	KV	0	J (≥ 35,0) **161,2 143,3 186,9**	(≥ 50,0) **163,8**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**				**Note / *Remarks:***					**Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**				
816/1/B	105918	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	W T 1/2	KV	0	J (≥ 35,0) **173,1 182,4 178,6**	(≥ 50,0) **178,0**					02/08/2016
Specifica / *Specification:* **Order Reqs.1**				**Note / *Remarks:***					**Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**				

PROVA DI PIEGA — *Bend test*

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method* NO DIE FORMER	Dimensioni *Wth. Length Width* (mm)	Posizione di prelievo / *Test position*	Q.tà / *Q.ty*	Temp. / *Temp.* (°C)	Angolo / *Angle* (°)	Ø mandrino / *Ø Former Wth. Ø*	Dist. appoggi / *Dist. rollers* (mm)	Lubrificante / *Lubrificant*	Imperfezioni osservate / *Imperfections observed* — Tipo / *Type*	Q.tà / *Q.ty*	Dimensioni / *Dimensions*	Posizione / *Location*	Data esecuzione / *Date of Testing*
816/1/B	* 105919	API 5L 45th Ed. (2012)	18,0 220 38,0	W TFBB FT	1	23	180	≤ x 18,0 100	139,2	Grafite	No cracks are visible without the use of magnifying aids.	0			02/08/2016

Specifica / *Specification:* **Order Reqs.1** **Note / *Remarks:*** **Esito delle prove / *Result of tests:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
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d) Il campionamento dei provini viene eseguito dal Cliente. *d) Clients are in charge of sampling.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Sandro Buscarini - Inspector
Milan Office
Lloyd's Register Inspector

Data Ingresso Materiale / *Date of Material Arrival*	Data Rapporto di prova / *Test Report Date*	Cliente / *Customer*	Cliente / *Customer*	Responsabile di Reparto / *Department Manager*	Responsabile Laboratorio / *Laboratory Manager*
29/07/2016	**02/08/2016**			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRP dt. 27/09/2013

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Mechanical and Chemical Laboratory Non Destructive Test

RAPPORTO DI PROVA
TEST REPORT

PM 21996 / 16 Page 2 of 2

S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 B / B

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http:\\www.sidertest.it sidertest@sidertest.it

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**
Subcliente/Subcustomer **ROSETTI MARINO SPA**

Ordine / *Order*: **1716001444 116A40A**

Commessa / *Job*: **316001816**

816/1/B	* 105920	API 5L 45th Ed. (2012)	18,0	220	38,0	W	TRBB	FT	1	23	180	≤ x	18,0	100	139,2	Grafite	No cracks are visible without the use of magnifying aids.	0	02/08/2016

Specifica / *Specification:* **Order Reqs.1** **Note /*Remarks:*** **Esito delle prove /*Result of tests:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Butt weld: SBB Transverse side, TFBB Tranverse face, TRBB Tranverse root, LFBB Longitudinal face, LRBB Longitudinal root. Cladding without butt weld: FBC Face, SBC Side. Cladding with butt weld: FBCB Face, SBCB Side.

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente.
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta.
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
d) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch) T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness) UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*		Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**	Lloyd's Register EMEA a member of the Lloyd's Register group Witnessed ☐ Monitored ☐ Reviewed Sandro Buscarini - Inspector Milan Office			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRP dt. 27/09/2013

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

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RAPPORTO DI PROVA
TEST REPORT
PM 21997 / 16 Page 1 of 1
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine *Order* **1716001444 116A40A**	Commessa *Job* **316001816**
Subcliente/Subcustomer **ROSETTI MARINO SPA**		

Descrizione *Description* **PIPE 508 x 25.40 mm**	Quantità *Quantity* **17.85 m**	Posizione *Item*	Prova Nr. *Test. Nr.* **816/2**	Colata *Heat* **51087**	Materiale *Material*	**API 5L:2013 Gr. X52 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo *Lo*	Posizione di prelievo *Test position*	Temp *Temp. (°C)*	Snervamento *Yield strength (MPa)*	Snervamento *(MPa)*	Rottura *Tensile strength Rm (MPa)*	Allungamento *Elongation A (%)*	Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
816/2	105886	ASTM A 370-14 (Tension Test)	12,45	50,00	B T 1/2	23	(360÷530)	Rt0,5% **382**	(460÷760) **515**	(≥ 20,4) **33,2**		(≤ 0,93) **0,74**	02/08/2016

Specifica / *Specification:* **Material Standard** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*	Tipo *Type*	Temp *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo Single Value*	*Media Average*	Area di taglio / Shear area *Valore singolo (%) Single Value (%)*	*Media (%) Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) Single Value (mm)*	*Media (mm) Average (mm)*	Data esecuzione *Date of Testing*
816/2	105887	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0) **198,2 193,8 184,8**	≥ 50,0 **192,3**					02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth. Length Ø (mm)*	Posizione di prelievo *Test position*	Q.tà *Q.ty*	Temp. *Temp. (°C)*	Posizione saldatura *Weld position (°)*	e *e*	Distanza piastre *Rollers distance H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo *Type*	Q.tà *Q.ty*	Dimensioni *Dimensions*	Posizione *Location*	1°parte *Step 1*	2°parte *Step 2*	Data esecuzione *Date of Testing*
816/2	105888	ASTM A 530/A530M-12 Par.21	25,4 70 508	B T FT	1	23		0,07	226,5	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
b) We declare that this test report cannot be partially reproduced without our written approval.
c) Compliance with documents in "Specification" refers only to the tests described on this test report.
*d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.*
e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Lloyd's Register EMEA
An associate of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☐ Reviewed
Sandro Buscarini - Inspector
Milan Office

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRS dt. 27/09/2013

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RAPPORTO DI PROVA
TEST REPORT
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S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA — ENTE ITALIANO DI ACCREDITAMENTO — LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine / *Order* **1716001444 116A40A**	Commessa / *Job* **316001816**	
Subcliente/Subcustomer **ROSETTI MARINO SPA**			

Descrizione / *Description* **PIPE 355.6 x 12.70 mm**	Quantità / *Quantity* **63.52 m**	Posizione / *Item*	Prova Nr. / *Test. Nr.* **816/3**	Colata / *Heat* **868266**	Materiale / *Material*	**API 5L:2013 Gr. X52 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *With Ø / Width ØPipe* (mm)	Lo / *Lo*	Posizione di prelievo / *Test position*	Temp. / *Temp.* (°C)	Snervamento / *Yield strength* (MPa)		Rottura / *Tensile strength* Rm (MPa)	Allungamento / *Elongation* A (%)	Strizione / *Area Reduction* Z (%)	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione / *Date of Testing*
816/3	105889	ASTM A 370-14 (Tension Test)	10,61 12,50	50,00	B T FT	23	(360÷530) Rt0,5% **366**		(460÷760) **547**	(≥ 20,7) **35,0**		(≤ 0,93) **0,67**	02/08/2016

Specifica / *Specification:* Material Standard **Note /*Remarks:*** **Esito delle prove / *Conclusion:* Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni / *Dimension* *Size Width Length*	Posizione di prelievo / *Test position*	Tipo / *Type*	Temp / *Temp.* (°C)	Energia assorbita / Absorbed energy *Valore singolo / Single Value*			*Media / Average*	Area di taglio / Shear area *Valore singolo (%) / Single Value (%)*	*Media (%) / Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) / Single Value (mm)*	*Media (mm) / Average (mm)*	Data esecuzione / *Date of Testing*
816/3	105890	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0)	**179,2**	**150,9**	**186,1** (≥ 50,0) **172,1**					02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:* Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *With. Length Ø* (mm)	Posizione di prelievo / *Test position*	Q.tà / *Q.ty*	Temp. / *Temp.* (°C)	Posizione saldatura / *Weld position* (°)	e / *e*	Distanza piastre / *Rollers distance* H (mm)	Imperfezioni osservate / *Imperfections observed* Tipo / *Type*	Q.tà / *Q.ty*	Dimensioni / *Dimensions*	Posizione / *Location*	1°parte / *Step 1*	2°parte / *Step 2*	Data esecuzione / *Date of Testing*
816/3	105891	ASTM A 530/A530M-12 Par.21	12,7 70 356	B T FT	1	23		0,07	128,5	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / *Specification:* Order Reqs.8 **Note /*Remarks:*** **Esito delle prove / *Conclusion:* Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
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*d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.*
e) Sampling is in charge of supplier.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale / *Date of Material Arrival*	Data Rapporto di prova / *Test Report Date*		Cliente / *Customer*	Cliente / *Customer*	Responsabile di Reparto / *Department Manager*	Responsabile Laboratorio / *Laboratory Manager*
29/07/2016	**02/08/2016**	Lloyd's Register EMEA — A member of the Lloyd's Register group — Witnessed ☐ Monitored ☐ Reviewed — Sandro Buscarini - Inspector — Milan Office — Lloyd's Register Inspector			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRS dt. 27/09/2013

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RAPPORTO DI PROVA
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PM 21999 / 16 Page 1 of 1
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine *Order*	**1716001444 116A40A**	Commessa *Job* **316001816**
Subcliente/Subcustomer **ROSETTI MARINO SPA**			

Descrizione *Description* **PIPE 273 x 15.88 mm**	Quantità *Quantity* **23.44 m**	Posizione *Item*	Prova Nr. *Test. Nr.* **816/4**	Colata *Heat* **49921**	Materiale *Material*	**API 5L:2013 Gr. X52 PSL2**	

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo *Lo*	Posizione di prelievo *Test position*	Temp. *Temp. (°C)*	Snervamento *Yield strength (MPa)*		Rottura *Tensile strength Rm (MPa)*	Allungamento *Elongation A (%)*	Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
816/4	105892	ASTM A 370-14 (Tension Test)	12,60 12,50	50,00	B T FT	23	(360÷530) Rt0,5% **364**		(460÷760) **592**	(≥ 21,5) **33,7**		(≤ 0,93) **0,62**	02/08/2016

Specifica / ***Specification:*** **Material Standard** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*	Tipo *Type*	Temp *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo Single Value*	*Media Average*	Area di taglio / Shear area *Valore singolo (%) Single Value (%)*	*Media (%) Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) Single Value (mm)*	*Media (mm) Average (mm)*	Data esecuzione *Date of Testing*
816/4	105893	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0) **180,9 211,4 213,4**	≥ 50,0 **201,9**					02/08/2016

Specifica / ***Specification:*** **Order Reqs.8** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth. Length Ø (mm)*	Posizione di prelievo *Test position*	Q.tà *Q.ty*	Temp. *Temp. (°C)*	Posizione saldatura *Weld position (°)*	e *e*	Distanza piastre *Rollers distance H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo *Type*	Q.tà *Q.ty*	Dimensioni *Dimensions*	Posizione *Location*	1°parte *Step 1*	2°parte *Step 2*	Data esecuzione *Date of Testing*
816/4	105894	ASTM A 530/A530M-12 Par.21	15,8 70 273	B T FT	1	23		0,07	132,2	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / ***Specification:*** **Order Reqs.8** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
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e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*		Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**	Lloyd's Register EMEA A member of the Lloyd's Register group *Inspector* ☑ Witnessed ☐ Monitored ☐ Reviewed Sandro Buscarini - Inspector Milan Office			***Davide Morresi***	***Paolo Amani***

R_Rpt_TRS dt. 27/09/2013

firmato elettronicamente - electronically signed

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RAPPORTO DI PROVA
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LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine *Order* **1716001444 116A40A**	Commessa *Job* **316001816**
Subcliente/Subcustomer **ROSETTI MARINO SPA**		

Descrizione *Description* **PIPE 273 x 12.70 mm**	Quantità *Quantity* **46.22 m**	Posizione *Item*	Prova Nr. *Test. Nr.* **816/5/A**	Colata *Heat* **872796**	Materiale *Material*	**API 5L:2013 Gr. X52 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo *Lo*	Posizione di prelievo *Test position*	Temp. *Temp. (°C)*	Snervamento *Yield strength (MPa)*		Rottura *Tensile strength Rm (MPa)*	Allungamento *Elongation A (%)*	Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
816/5/A	105895	ASTM A 370-14 (Tension Test)	11,51 6,25	25,00	B T FT	23	(360÷530)	Rt0,5% **412**	(460÷760) **538**	(≥ 18,3) **44,4**		(≤ 0,93) **0,77**	02/08/2016

Specifica / *Specification:* **Material Standard** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*	Tipo *Type*	Temp *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo Single Value*				*Media Average*	Area di taglio / Shear area *Valore singolo (%) Single Value (%)*	*Media (%) Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) Single Value (mm)*	*Media (mm) Average (mm)*	Data esecuzione *Date of Testing*
816/5/A	105896	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0)	**155,9**	**191,2**	**150,9**	(≥ 50,0) **166,0**					02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth. Length Ø (mm)*	Posizione di prelievo *Test position*	Q.tà *Q.ty*	Temp. *Temp. (°C)*	Posizione saldatura *Weld position (°)*	e *e*	Distanza piastre *Rollers distance H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo *Type*	Q.tà *Q.ty*	Dimensioni *Dimensions*	Posizione *Location*	1°parte *Step 1*	2°parte *Step 2*	Data esecuzione *Date of Testing*
816/5/A	105897	ASTM A 530/A530M-12 Par.21	12,7 70 273	B T FT	1	23		0,07	116,6	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente *a) We declare that this test report refers only to the examined sample supplied by the Customer.*
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d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA. *d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.*
e) Il campionamento dei provini viene eseguito dal Cliente. *e) Sample preparation is carried out by the Customer.*

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Ispettore / Inspector
☑ Witnessed ☐ Monitored ☐ Reviewed
Sandro Buscarini - Inspector
Milan Office

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

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Mechanical and Chemical Laboratory Non Destructive Test
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http:\\www.sidertest.it sidertest@sidertest.it

RAPPORTO DI PROVA
TEST REPORT
PM 22001 / 16 Page 1 of 1
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine / *Order* **1716001444 116A40A**	Commessa / *Job* **316001816**	
Subcliente/Subcustomer **ROSETTI MARINO SPA**			
Descrizione / *Description* **PIPE 273 x 12.70 mm**	Quantità / *Quantity* **81.57 m**	Posizione / *Item*	Prova Nr. / *Test. Nr.* **816/5/B**
Colata / *Heat* **848736**	Materiale / *Material* **API 5L:2013 Gr. X52 PSL2**		

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *With* Ø / *Width* ØPipe (mm)	Lo / *Lo*	Posizione di prelievo / *Test position*	Temp. / *Temp.* (°C)	Snervamento / *Yield strength* (MPa)	(MPa)	Rottura / *Tensile strength* Rm (MPa)	Allungamento / *Elongation* A (%)	Strizione / *Area Reduction* Z (%)	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione / *Date of Testing*
816/5/B	105898	ASTM A 370-14 (Tension Test)	11,03 12,50	50,00	B T FT	23	(360÷530) Rt0,5% **391**		(460÷760) **579**	(≥ 20,9) **33,4**		(≤ 0,93) **0,68**	02/08/2016

Specifica / *Specification:* **Material Standard** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni / *Dimension* *Size Width Length*	Posizione di prelievo / *Test position*	Tipo / *Type*	Temp / *Temp.* (°C)	Energia assorbita / *Absorbed energy*	*Valore singolo* / *Single Value*	*Media* / *Average*	Area di taglio / *Shear area* *Valore singolo (%)* / *Single Value (%)*	*Media (%)* / *Average (%)*	Espansione laterale / *Lateral expansion* *Valore singolo (mm)* / *Single Value (mm)*	*Media (mm)* / *Average (mm)*	Data esecuzione / *Date of Testing*
816/5/B	105899	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0)	**140,1 128,2 135,0**	(≥ 50,0) **134,4**					02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova / *Specimen*	ID Prova / *ID Specimen*	Metodo di prova / *Test method*	Dimensioni *With.* *Length* Ø (mm)	Posizione di prelievo / *Test position*	Q.tà / *Q.ty*	Temp. / *Temp.* (°C)	Posizione saldatura / *Weld position* (°)	e / *e*	Distanza piastre / *Rollers distance* *H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo / *Type*	Q.tà / *Q.ty*	Dimensioni / *Dimensions*	Posizione / *Location*	1°parte / *Step 1*	2°parte / *Step 2*	Data esecuzione / *Date of Testing*
816/5/B	105900	ASTM A 530/A530M-12 Par.21	12,7 70 273	B T FT	1	23		0,07	116,6	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / *Specification:* **Order Reqs.8** **Note /*Remarks:*** **Esito delle prove / *Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
e) Il campionamento dei provini viene eseguito dal Cliente.

a) We declare that this test report refers only to the examined sample supplied by the Customer.
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c) Compliance with documents in "Specification" refers only to the tests described on this test report.
*d) The * symbol before "ID_Prova" indicates that the test is not accredited by ACCREDIA.*
e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Sandro Buscarini - Inspector
Milan Office
Lloyd's Register Inspector

Data Ingresso Materiale / *Date of Material Arrival*	Data Rapporto di prova / *Test Report Date*	Cliente / *Customer*	Cliente / *Customer*	Responsabile di Reparto / *Department Manager*	Responsabile Laboratorio / *Laboratory Manager*
29/07/2016	**02/08/2016**			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRS dt. 27/09/2013

Dichiarazioni false, fittizie o fraudolente e modifiche del presente Rapporto di prova costituiscono reato punibile secondo le norme penali vigenti. *Any false statement or modification of this test report is a violation of law and therefore the Laboratory may take legal action.*

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RAPPORTO DI PROVA
TEST REPORT
PM 22002 / 16 Page 1 of 1
S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017**	Ordine *Order* **1716001444 116A40A**	Commessa *Job* **316001816**
Subcliente/Subcustomer **ROSETTI MARINO SPA**		

Descrizione *Description* **PIPE 273 x 12.70 mm**	Quantità *Quantity* **32.63 m**	Posizione *Item*	Prova Nr. *Test. Nr.* **816/5/C**	Colata *Heat* **849228**	Materiale *Material* **API 5L:2013 Gr. X52 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — ***Tensile test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo *Lo*	Posizione di prelievo *Test position*	Temp *Temp. (°C)*	Snervamento *Yield strength (MPa)*		Rottura *Tensile strength Rm (MPa)*	Allungamento *Elongation A (%)*	Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
816/5/C	105901	ASTM A 370-14 (Tension Test)	10,55 12,50	50,00	B T FT	23	(360÷530)	Rt0,5% **364**	(460÷760) **541**	(≥ 20,7) **34,5**		(≤ 0,93) **0,67**	02/08/2016

Specifica / ***Specification:*** **Material Standard** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — ***Notched-bar impact test*** **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*	Tipo *Type*	Temp *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo Single Value*				*Media Average*	Area di taglio / Shear area *Valore singolo (%) Single Value (%)*	*Media (%) Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) Single Value (mm)*	*Media (mm) Average (mm)*	Data esecuzione *Date of Testing*
816/5/C	105902	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J	(≥ 35,0) **127,5**	**131,9**	**122,0**	≥ 50,0 **127,1**					02/08/2016

Specifica / ***Specification:*** **Order Reqs.8** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — ***Flattening test***

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth. Length Ø (mm)*	Posizione di prelievo *Test position*	Q.tà *Q.ty*	Temp. *Temp. (°C)*	Posizione saldatura *Weld position (°)*	e *e*	Distanza piastre *Rollers distance H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo *Type*	Q.tà *Q.ty*	Dimensioni *Dimensions*	Posizione *Location*	1°parte *Step 1*	2°parte *Step 2*	Data esecuzione *Date of Testing*
816/5/C	105903	ASTM A 530/A530M-12 Par.21	12,7 70 273	B T FT	1	23		0,07	116,6	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / ***Specification:*** **Order Reqs.8** **Note /***Remarks:* **Esito delle prove /** ***Conclusion:*** **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

a) Si dichiara che i risultati presenti in questo rapporto di prova si riferiscono al solo campione fornito dal Cliente
b) Si dichiara che il rapporto di prova non può essere riprodotto parzialmente, salvo nostra approvazione scritta
c) La conformità ai documenti in "Specifica" riguarda solamente le prove presenti in questo rapporto di prova.
d) Il simbolo * antecedente a "ID_Prova" indica una prova non accreditata da ACCREDIA.
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e) Clients are in charge of sampling.

Legenda / Legend:
B(Base) H(Heat Affected Zone) FL(Fusion Line) W(Weld) E(Extrados) I(Intrados) RN(Run) CR(Crotch) BR(Branch)
T(Transversal) L(Longitudinal), Tg(Tangential) Ax(Axial) Rd(Radial) Th(Through Thickness)
UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*		Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	02/08/2016	Lloyd's Register EMEA A member of the Lloyd's Register group — Ispettore / *Inspector* — Witnessed ☐ Monitored ☐ Reviewed — Sandro Buscarini - Inspector Milan Office — Ispettore Lloyd's / *Inspector*			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRS dt. 27/09/2013

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RAPPORTO DI PROVA
TEST REPORT

PM 22003 / 16 Page 1 of 1

S.I.M. No.: 6212 / 16 F.C.P. No.: 6212 / 16 A / B

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 0864

Dati forniti dal Cliente / *Data supplied by the Customer:*

Cliente/Customer **T.A.L. Spa Tubi Acciaio Lombarda con socio unico V. G. di Vittorio - Zona Ind. 29017** | Ordine / *Order* **1716001444 116A40A** | Commessa / *Job* **316001816**

Subcliente/Subcustomer **ROSETTI MARINO SPA**

Descrizione / *Description* **PIPE 219.1 x 12.70 mm** | Quantità / *Quantity* **11.67 m** | Posizione / *Item* | Prova Nr. / *Test. Nr.* **816/6** | Colata / *Heat* **44044** | Materiale / *Material* **API 5L:2013 Gr. X52 PSL2**

Campione fornito dal Cliente / *Sample supplied by the Customer:* parte del prodotto finito / part of finished product

PROVA DI TRAZIONE — *Tensile test*

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth Ø / Width ØPipe (mm)*	Lo *Lo*	Posizione di prelievo *Test position*	Temp *Temp. (°C)*	Snervamento *Yield strength (MPa)*	Snervamento *(MPa)*	Rottura *Tensile strength Rm (MPa)*	Allungamento *Elongation A (%)*	Strizione *Area Reduction Z (%)*	S/R *Ratio Yield strength / Tensile strength*	Data esecuzione *Date of Testing*
816/6	105904	ASTM A 370-14 (Tension Test)	11,74 12,51	50,00	B T FT	23	(360÷530) Rt0,5% **386**		(460÷760) **522**	(≥ 21,2) **37,5**		(≤ 0,93) **0,74**	02/08/2016

Specifica / *Specification:* **Material Standard** Note /*Remarks:* Esito delle prove /*Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI RESILIENZA — *Notched-bar impact test* — **Energia nominale / Nominal Energy 750,0 (# Fondoscala - Full scale)**

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Dimension Size Width Length*	Posizione di prelievo *Test position*	Tipo *Type*	Temp *Temp. (°C)*	Energia assorbita / Absorbed energy *Valore singolo Single Value*	*Media Average*	Area di taglio / Shear area *Valore singolo (%) Single Value (%)*	*Media (%) Average (%)*	Espansione laterale / Lateral expansion *Valore singolo (mm) Single Value (mm)*	*Media (mm) Average (mm)*	Data esecuzione *Date of Testing*
816/6	105905	ASTM A 370-14 (Charpy Impact Test)	10 x 10 x 55	B T 1/2	KV	0	J (≥ 35,0) **252,6 247,9 237,8**	≥ 50,0 **246,1**					02/08/2016

Specifica / *Specification:* **Order Reqs.8** Note /*Remarks:* Esito delle prove /*Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

PROVA DI SCHIACCIAMENTO — *Flattening test*

No. Prova *Specimen*	ID Prova *ID Specimen*	Metodo di prova *Test method*	Dimensioni *Wth. Length Ø (mm)*	Posizione di prelievo *Test position*	Q.tà *Q.ty*	Temp. *Temp. (°C)*	Posizione saldatura *Weld position (°)*	e *e*	Distanza piastre *Rollers distance H (mm)*	Imperfezioni osservate / *Imperfections observed* Tipo *Type*	Q.tà *Q.ty*	Dimensioni *Dimensions*	Posizione *Location*	1°parte *Step 1*	2°parte *Step 2*	Data esecuzione *Date of Testing*
816/6	105906	ASTM A 530/A530M-12 Par.21	12,7 70 219	B T FT	1	23		0,07	106,2	No cracks are visible without the use of magnifying aids.	0			☑	☑	02/08/2016

Specifica / *Specification:* **Order Reqs.8** Note /*Remarks:* Esito delle prove /*Conclusion:* **Conforme a 'Specifica' / Compliant with 'Specification'**

Osservazioni: MLN1691405
Observations:

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e) Client at its charge of sampling

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UP-mm (Outside Diameter), D-mm (Inside Diameter), FT (Full Thk), R (Root), n/n (Depth Ratio)

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Witnessed Monitored Reviewed
Sandro Buscarini - Inspector
Milan Office

Data Ingresso Materiale *Date of Material Arrival*	Data Rapporto di prova *Test Report Date*	Cliente *Customer*	Cliente *Customer*	Responsabile di Reparto *Department Manager*	Responsabile Laboratorio *Laboratory Manager*
29/07/2016	**02/08/2016**			***Davide Morresi***	***Paolo Amani***

firmato elettronicamente - electronically signed

R_Rpt_TRS dt. 27/09/2013

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Tubi Acciaio Lombarda S.p.A.

HARDNESS TEST CERTIFICATE

Issued by: T.A.L. S.p.A Fiorenzuola d'Arda (PC)	**Date:** 29/07/2016	**Cert. Nr.** HR/16/018
Client: ROSETTI MARINO S.P.A.	**P.O.:** 1716001431 116A40A / 1716001444 116A80A	**COI:** 316001795 - 316001816

Item	Description (mm)	Q.ty	Mat. Spec.	Heat Number	HB
	323,8 X 9,53	102,95	API 5L X52	50366	163; 155
	762 X 29,60	24,51	API 5L X52	G12219	154; 149
	762 X 29,60	12,48	API 5L X52	G13110	155; 158
	508 X 25,40	17,85	API 5L X52	51087	166; 168
	355,6 X 12,70	63,52	API 5L X52	868266	169; 164
	273 X 15,88	23,44	API 5L X52	49921	171; 173
	273 X 12,70	46,22	API 5L X52	872796	172; 159
	273 X 12,70	81,57	API 5L X52	848736	165; 166
	273 X 12,70	32,63	API 5L X52	849228	162; 160
	219,1 X 12,70	11,67	API 5L X52	44044	171; 175

Note: Material acc. to NACE MR 0175/2002 – NACE MR 0103/2012 for hardness max. 238HB ≈ 22HRC

T.A.L. S.p.A.

T.A.L. S.p.A.
TUBI ACCIAIO LOMBARDA
CON SOCIO UNICO

Inspector signature

Lloyd's Register EMEA
A member of the Lloyd's Register group
☐ Witnessed ☐ Monitored ☒ Reviewed
Sandro Buscarini - Inspector
Milan Office

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Filiale e Magazzino:
40127 Bologna Via del Commercio Associato 17
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Cap. Soc. € 4.695.600 – Isc. Reg. Imp. PC 032-179187 – REA PC 107088 – Cod. Fisc. 00305910333 – P.IVA 01257330330 – http://www.tal.it E-mail: tal@tal.it

Table 1 — Pipe grades, steel grades and acceptable delivery conditions *(continued)*

PSL	Delivery condition	Pipe grade/steel grade [a,b]
PSL 2	Thermomechanical rolled or thermomechanical formed	L245M or BM
		L290M or X42M
		L320M or X46M
		L360M or X52M
		L390M or X56M
		L415M or X60M
		L450M or X65M
		L485M or X70M
		L555M or X80M
	Thermomechanical rolled	L625M or X90M
		L690M or X100M
		L830M or X120M

[a] For intermediate grades, the steel grade shall be in one of the following formats: (1) The letter L followed by the specified minimum yield strength in MPa and, for PSL 2 pipe, the letter describing the delivery condition (R, N, Q or M) consistent with the above formats. (2) The letter X followed by a two or three digit number equal to the specified minimum yield strength in 1000 psi rounded down to the nearest integer and, for PSL 2 pipe, the letter describing the delivery condition (R, N, Q or M) consistent with the above formats.

[b] The suffix (R, N, Q or M) for PSL 2 grades belongs to the steel grade.

[c] Seamless only.

7 Information to be supplied by the purchaser

7.1 General information

The purchase order shall include the following information:

a) quantity (e.g. total mass or total length of pipe);

b) PSL (1 or 2);

c) type of pipe (see Table 2);

d) reference to API 5L;

e) steel grade (see 6.1, H.4.1.1, or J.4.1.1, whichever is applicable);

f) outside diameter and wall thickness (see 9.11.1.2);

g) length and type of length (random or approximate) (see 9.11.1.3, 9.11.3.3 and Table 12);

h) confirmation of applicability of individual annexes.

	FACILITY: Nenè Field - WHP3	**CONTRACTOR:** ROE	3066_01_TQ_ROE_ENI_STR_00002

TQ - TECHNICAL QUERY

Originator Contact Details	Owner: STR		
	Participating:	**Page**	1 / 2
Subject	Utilization of API 5L Pipe for Ø762mm Diameter	**Revision**	

PART 1A - DETAILS OF QUERY (To be filled in by Contractor)

REFERENCE DOCUMENTS

Body	**Description:** ENI Spec.08832 par.2.1.2 required to utilize API5L Pipes until diameters of 508mm. For Topside columns we have found on market pipe Ø762 API5LX65 instead of EN10025 S355K2 required in ENI standard. **Reference Documents:** 08832.STR.MME.SPC - GENERAL SPECIFICATION OFFSHORE PLATFORMS STEEL FOR STRUCTURES **Proposed solution** (by Contractor): Contractor proposes to use Ø762x29.6mm API5LX65 instead of Ø762x25.4mm EN10025 S355K2. This allow us to reduce purchase time.
Cost Impact	No
Schedule Impact	Yes

For other comments about cost or schedule impacts, please attach some evidences.

Issue by (Raised by)	NICOLA MAZZAVILLANI	**Date**	07/28/2016

PART 2A - ENI RESPONSE

Distribution List

Company Reviewers	Engineering PE TM,FEM,Structural,M & C
Company Approver	FEM
Cost Impact	No
Schedule Impact	Yes
RESPONSE	**COMMENTS**
Approved with comments	**Engineering PE TM:** **FEM:** **Structural:** See M&C notes **M & C:** The use of API 5L instead of S355K2 is acceptable only if all the following points are satisfied: - Steel grade shall be API 5L X65 Q0 or M0 PSL2; - API 5L is NOT applicable for joint cans with thickness greater than 20 mm. For these cases, only EN 10025 or EN 10225 Z-quality steels are applicable. - Material shall be fully compliance with CPY standard 08832; please consider in particular that material shall be fully compliance with par. 2.3.2 (chemical composition). Moreover, based on CEV content, pre-heating treatment is required according to paragraph 3.1.1 of spec 08833;

	- Material shall be Impact Tested according to tab. G and H of CPY standard 08832. **FEM:** TQ accepted with comments, based on described conditions.		
Technical Approved	FEM - Benedusi Matteo	**Approval Date**	8/11/2016 2:56:43 PM
To be filled only in case of cost or schedule impact			
SIGNATURE		**Date**	

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL PROJECTS EUROPE B.V.	1719000840	118A50B	Q011901176

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **18/06/19**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Packing slip

Customer: Rosetti Marino SpA
Via Trieste 230
RAVENNA,48122
Italy

Send to: Rosetti Marino Spa
Via Trieste 230
RAVENNA,48122
Italy

ArcelorMittal

ArcelorMittal Projects Europe B.V.

Project No. : 20191178 19-0280
Order No. : 2110000193
Rev. / Date : 11/06/2019
Pack number : 2210000736
Your reference : PO 1719000840 118A50B

Pos	Item number			Length(mm)	Weight	Quality	Heat No.	Stocknr. Supplier	Certificate
20	**Pipe**	Diameter	Wall thickness						
	1 Pieces	559	25,4	10.840	3.623,25	S355G15+N / EN10225	194069		20945RP17
	1 Pieces	559	25,4	11.890	3.974,21	S355G15+N / EN10225	195242		24966RP18
30	**Pipe**	Diameter	Wall thickness						
	1 Pieces	508	19,05	11.540	2.650,85	S355G15+N / EN10225	1815480	3-18-47-1827	D 4971/1
40	**Pipe**	Diameter	Wall thickness						
	1 Pieces	457,2	25,4	8.110	2.193,60	S355G15+N / EN10225	184921		16187RP15
50	**Pipe**	Diameter	Wall thickness						
	1 Pieces	406,4	25,4	11.570	2.761,29	S355G15+Q / EN10225	986002		01-019-02152
	1 Pieces	406,4	25,4	11.770	2.809,02	S355G15+Q / EN10225	986002		01-19-02152
90	**Pipe**	Diameter	Wall thickness						
	1 Pieces	323,9	15,9	11.650	1.407,00	S355G15+N / EN10225	57950	2-16-47-1997	B 11174/1 REV 1
	1 Pieces	323,9	15,9	11.950	1.443,23	S355G15+N / EN10225	57950	2-16-47-1999	B 11174/1 REV 1
	1 Pieces	323,9	15,9	11.990	1.448,06	S355G15+N / EN10225	57950	2-16-47-1998	B 11174/1 REV 1
120	**Pipe**	Diameter	Wall thickness						
	1 Pieces	168,3	21,95	11.480	909,47	S355G15+N / EN10225	345801		40898Mu14
	1 Pieces	168,3	21,95	11.480	909,47	S355G15+N / EN10225	345801		40898Mu14

Quantity : 11 Pieces

Total 24.129,45 KG

Packing slip

Customer: Rosetti Marino SpA
Via Trieste 230
RAVENNA,48122
Italy

Send to: Rosetti Marino Spa
Via Trieste 230
RAVENNA,48122
Italy

ArcelorMittal Projects Europe B.V.

Project No. : 20191178 19-0280
Order No. : 2110000193
Rev. / Date : 17/06/2019
Pack number : 2210000944
Your reference : PO 1719000840 118A50B

Project Manager : Michel Portengen
Telephone : +31 88 0083 738
E-mail :

Pos	Item number			Length(mm)	Weight	Quality	Heat No.	Stocknr. Supplier	Certificate
80	**Pipe**	Diameter	Wall thickness						
	1 Piece	323,9	19,1	11.540	1.656,81	S355G15+N / EN10225	1161693	2-16-36-1164	B 10611/2 REV 1

Quantity : 1 Piece

Total 1.656,81 KG

Packing slip

Customer: Rosetti Marino SpA
Via Trieste 230
RAVENNA,48122
Italy

Send to: Rosetti Marino Spa
Via Trieste 230
RAVENNA,48122
Italy

ArcelorMittal

ArcelorMittal Projects Europe B.V.

Project No. : 20191178 19-0280
Order No. : 2110000193
Rev. / Date : 17/06/2019
Pack number : 2210000942
Your reference : PO 1719000840 118A50B

Project Manager : Michel Portengen
Telephone : +31 88 0083 738
E-mail :

Pos	Item number			Length(mm)	Weight	Quality	Heat No.	Stocknr. Supplier	Certificate
10	**HRPL**								
	1 Piece	2050	40	12.000	7.724,40	S460G2+M / EN10225	804051	31681921	A0360952-B
60	**Pipe**	Diameter	Wall thickness						
	1 Piece	323,9	25,4	11.000	2.056,79	S355G15+N / EN10225	53872	2-15-24-947	D 2309/2
	1 Piece	323,9	25,4	11.000	2.056,79	S355G15+N / EN10225	53872	2-15-24-946	D 2309/2
70	**Pipe**	Diameter	Wall thickness						
	1 Piece	323,9	21,44	10.060	1.608,83	S355G15+N / EN10225	62997	2-18-27-1411	D 4445/1
80	**Pipe**	Diameter	Wall thickness						
	1 Piece	323,9	19,1	11.760	1.688,40	S355G15+N / EN10225	1161693	2-16-36-1169	B 10611/1 REV 1
100	**Pipe**	Diameter	Wall thickness						
	1 Piece	323,9	12,7	10.370	1.010,75	S355G15+N / EN10225	10756K	2-18-43-322	B 16062/1
110	**Pipe**	Diameter	Wall thickness						
	1 Piece	219,1	25,4	9.590	1.163,59	S355G15+N / EN10225	50352	2-14-12-2392	B 3395/1

Quantity : 7 Pieces

Total 17.309,55 KG

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

N141CN43-4

Z02 Date 29-05-2018

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0360952/B	A08 Order-No.:	8500177	A07 OrderDat. 07-02-2018	Date of dispatch 25-05-2018 4F

A06 Customer	ArcelorMittal Projects Europe B.V. Mannesmannweg 5 NL-4794 SL HEIJNINGEN	B01 Product	Plate		
		B02 Material	S460G2+M Z35 NORSOK MDS Y40	B03 Standard	EN 10225 : 2009
A07 OrderNo.	3200058380	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	ArcelorMittal Projects Europe B.V. Mannesmannweg 5 NL-4794 SL HEIJNINGEN				

A10 - Supplementary information

STOCK ORDER

B03 - Supplementary requirements

FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. // CA MAX. 0,005%, SB MAX. 0,010%, BI MAX. 0,010%, PB MAX. 0,010% SN MAX.0,020% AND AS MAX. 0,020% RESPECTED.// MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED PRODUCED BY BOF.
PLATES IN THICKNESS >= 25 MM UP TO <= 86 MM: MATERIAL IS IN ACCORDANCE WITH EN10225 OPTIONS 6,7,9,10,12,13 AND 18.
MATERIAL IS PRE-QUALIFIED ACC. TO ANNEX E OF EN10225

Z01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
705363	311929/1	110	65,00	2500,0	12000	1		15.479	69653	16-04-2018	
705778	318162/1	90	30,00	3050,0	12000	1		8.842	69653	25-04-2018	
705778	318164/1	90	30,00	3050,0	12000	1		8.875	69653	25-04-2018	
705779	318157/1	90	30,00	3050,0	12000	1		8.874	69653	24-04-2018	
705779	318159/1	90	30,00	3050,0	12000	1		8.903	69653	24-04-2018	
705779	318161/1	90	30,00	3050,0	12000	1		8.847	69653	24-04-2018	
804051	316819/11	100	40,00	2050,0	12000	1		7.893	69653	16-04-2018	
804051	316819/21	100	40,00	2050,0	12000	1		7.887	69653	16-04-2018	

A04
Symbol of the manufacturer's work

voestalpine

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Reinhard Siegmund
Surveyor

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Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
		Sum				8		75.600			

C70 - Method of steelmaking: strand casted material: pure oxygen blown with vacuum treatment; steel is fully killed.

B14 - Supplementary information

Dimensional tolerances acc. EN 10029/10
Flatness acc. EN 10029/10 class N
EN10163-2: Class A3 - Repair-welding not permitted.
Item 90, 100
Thicknesstolerance acc. EN 10029/10 tab.1 class C
Item 110
Thicknesstolerance acc. EN 10029/10 tab. 1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0200	.0100	.010	.42	.22
705363		.050	.185	1.490	.011	.0007	.029	.167	.490	.100	.012	.004	.028	.012	.0037	.0002	.0020	.0015	.0020	.0020	.002	.39	.16
705778		.030	.328	1.600	.009	.0007	.036	.172	.170	.020	.160	.004	.030	.011	.0041	.0002	.0080	.0015	.0020	.0020	.002	.36	.14
705779		.032	.341	1.600	.008	.0008	.035	.169	.180	.012	.156	.004	.030	.012	.0043	.0002	.0040	.0021	.0020	.0020	.002	.36	.14
804051		.029	.338	1.590	.007	.0006	.039	.163	.170	.005	.160	.004	.030	.012	.0035	.0002	.0030	.0015	.0020	.0020	.002	.35	.14

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
705363		.032	.044	.769
705778		.034	.045	.522
705779		.034	.046	.517
804051		.034	.046	.498

C99 - Supplementary information
BI <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Reh/Rm %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	460	540		17.0				
Set values <=							580	580	660			90.00	90.00		
705778	318164	30,0	30.60	F	O	T		537	601	A5	22.5		89.35		
	318164	30,0	30.57	F	O	T	554	543	619	A5	24.0	89.49	87.69	001	1
705779	318161	30,0	30.53	F	O	T	537	535	603	A5	22.9	89.05	88.81		
	318161	30,0	30.53	F	O	T	552	541	615	A5	24.4	89.80	88.01	001	1
804051	316819	30,0	40.56	F	O	T		493	592	A5	24.2		83.36		
	316819	30,0	40.66	F	O	T	516	513	587	A5	25.0	87.90	87.49	001	1
>=							460	460	540		17.0				
Set values <=							580	580	660			88.00	88.00		
705363	311929	30,0	41.49	F	O	T		461	600	A5	22.5		76.84		
	311929	30,0	40.34	F	O	T		516	599	A5	22.7		86.25	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
705363	311929	CV 10x10	F	ZB2	T	-40	329	324	326	326			strain aged 5%, 60 min. at 250°C
705778	318164	CV 10x10	F	ZB2	T	-40	373	379	224	325			strain aged 5%, 60 min. at 250°C
705779	318161	CV 10x10	F	ZB2	T	-40	371	337	369	359			strain aged 5%, 60 min. at 250°C
804051	316819	CV 10x10	F	ZB2	T	-40	382	389	390	387			strain aged 5%, 60 min. at 250°C
>=						-40	42	42	42	60			
Set values <=													
705363	311929	CV 10x10	F	O	T	-40	376	361	374	371			
	311929	CV 10x10	F	O	T	-40	303	280	278	287	001	1	
	311929	CV 10x10	F	K	T	-40	338	384	296	339			
	311929	CV 10x10	F	K	T	-40	308	278	337	307	001	1	
705778	318164	CV 10x10	F	O	T	-40	410	427	416	418			
	318164	CV 10x10	F	O	T	-40	347	372	353	357	001	1	

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BERGER Alfred

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
705779	318161	CV 10x10	F	O	T	-40	380	364	396	380			
	318161	CV 10x10	F	O	T	-40	364	347	332	348	001	1	
804051	316819	CV 10x10	F	O	T	-40	430	403	435	422			
	316819	CV 10x10	F	O	T	-40	359	364	373	366	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
Set values >=					248	248	248
Set values <=							
705363	311929	F	OS	HV10	242	240	243
705778	314544	F	OS	HV10	198	200	197
705779	314547	F	OS	HV10	207	206	204
804051	316819	F	OS	HV10	216	209	216

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						432	432	432	25	25	25	35
Set values <=												
705363	311929	Ø	9.98	F	S	600	594	595	53	76	74	68
705778	314544	Ø	10.00	F	S	588	587	587	82	82	82	82
705779	314540	Ø	10.01	F	S	579	578	578	82	81	83	82
804051	316819	Ø	10.01	F	S	567	568	567	83	81	84	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0200	.0100
705363	311929	.051	.185	1.520	.011	.0006	.029	.166	.520	.118	.011	.004	.027	.012	.0040	.0002	.0020	.0017	.0020	.0030
705778	318164	.029	.329	1.630	.009	.0006	.036	.166	.180	.023	.155	.004	.037	.011	.0034	.0002	.0020	.0016	.0020	.0020
705779	318259	.031	.334	1.630	.008	.0008	.034	.170	.180	.014	.154	.004	.037	.012	.0044	.0002	.0020	.0019	.0020	.0020
804051	316819	.028	.328	1.610	.007	.0007	.038	.161	.170	.004	.156	.004	.039	.012	.0037	.0002	.0020	.0015	.0020	.0020

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Quality Department Heavy Plates
BERGER Alfred

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>= Set values <=		.010	.42	.22	.090	.110	.900
705363	311929	.002	.40	.16	.031	.043	.815
705778	318164	.002	.36	.14	.041	.052	.524
705779	318259	.002	.36	.15	.041	.053	.518
804051	316819	.002	.35	.14	.043	.055	.491

C99 - Supplementary information
BI <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Pos 90:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +20 °C/-20 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Pos 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +20 °C/-20 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Pos 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +20 °C/-20 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the above-mentioned delivery corresponds to the order (and standard).

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for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Reinhard Siegmund
Surveyor

Z02
Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

voestalpine
ONE STEP AHEAD.

Remarks

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z03
Stamp of the inspection representative

NV

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ONE STEP AHEAD.

ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 90, 100
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 110
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z03
Stamp of the inspection representative

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BERGER Alfred

voestalpine
ONE STEP AHEAD.

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004

Page 1/3
B 3395/1
30.04.2014

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS
NETHERLANDS B.V.
MANNESMANNWEG 5, 4794SL
HEIJNINGEN NETHERLANDS

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.790 tons - lbs	105.41 meters - feets	11	3

Standard: API 5L Ed.45/2012 -PSL 2 ; NORSOK M120 Ed. 5,November 2008-Y 22 Rev.5,June 2007; EN 10225-2009;TPS for EU -Stock Rev.04/04.04.2013

Buyer's reference PO NO. : 3200033675 REV.01

Contract 50001507

Dimensions: 219.10 x 25.40 mm
-

Schedule: -

Length: 8.00 - 10.00 m

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355G15+N
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.55	0.008	0.025	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.010	-	0.0005	0.0140	-	-	-	-
			Min	-	-	0.25	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
50352		Heat analysis		0.13	1.20	0.30	0.005	0.010	0.06	0.10	0.17	0.009	0.029	0.05	0.060	0.001	0.003	0.0040	0.0003	0.0098	0.0000	0.0000	0.0033	0.0002
50512		Heat analysis		0.14	1.25	0.28	0.003	0.012	0.06	0.10	0.19	0.008	0.029	0.03	0.060	0.001	0.002	0.0017	0.0003	0.0097	0.0000	0.0000	0.0034	0.0006
50352	14-894	Product analysis		0.13	1.26	0.28	0.005	0.009	0.06	0.10	0.16	0.004	0.029	0.04	0.060	0.002	0.000	0.0015	0.0000	0.0096	0.0000	0.0020	0.0000	0.0000
50352	14-894	Product analysis		0.13	1.26	0.28	0.005	0.009	0.07	0.10	0.16	0.003	0.029	0.04	0.060	0.002	0.000	0.0018	0.0000	0.0096	0.0000	0.0020	0.0000	0.0000
50512	14-961	Product analysis		0.15	1.26	0.31	0.004	0.012	0.09	0.07	0.17	0.013	0.040	0.04	0.060	0.002	0.000	0.0013	0.0000	0.0095	0.0000	0.0020	0.0000	0.0000
50512	14-961	Product analysis		0.15	1.26	0.31	0.005	0.012	0.09	0.07	0.17	0.012	0.039	0.04	0.060	0.002	0.000	0.0014	0.0000	0.0095	0.0000	0.0020	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	-	-	-	-	-
50352		Heat analysis		2.96	0.061	0.064	0.380	0.38
50512		Heat analysis		2.99	0.061	0.063	0.380	0.40
50352	14-894	Product analysis		3.02	0.062	0.062	0.360	0.39
50352	14-894	Product analysis		3.02	0.062	0.062	0.370	0.39
50512	14-961	Product analysis		4.21	0.062	0.062	0.370	0.41
50512	14-961	Product analysis		4.11	0.062	0.062	0.370	0.41

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$

$CE_S = C+Mn/6$

$CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 Romania

Inspector/Buyer representative
ABS GALATZI
VGAUEA 30.04.2014

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004	Page 2/3 B 3395/1 30.04.2014	ArcelorMittal

Buyer:	ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS
Buyer's reference	PO NO. : 3200033675 REV.01
Contract	50001507

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.790 tons - lbs	105.41 meters - feets	11	3

Standard: API 5L Ed.45/2012 -PSL 2 ; NORSOK M120 Ed. 5,November 2008-Y 22 Rev.5,June 2007; EN 10225-2009;TPS for EU -Stock Rev.04/04.04.2013

Dimensions: 219.10 x 25.40 mm
-

Schedule: -

Length: 8.00 - 10.00 m

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355G15+N
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
50352	Longitudinal Round	50.8	-	12.60	-	0.00	-	124.6	-	14-1365	375.00	-	529.00	-	33.40	0.71
50352	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	14-793	394.90	-	535.00	-	30.50	0.74
50512	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	14-1815	399.00	-	556.00	-	33.80	0.72
50512	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	14-1000	394.90	-	535.00	-	30.90	0.74

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
50352	14-2405	Transversal	10x10x55	-50	-	133	140	143	27.0	139	-	-	-	95	95	95	1.28	1.36	1.31
50352	14-2406	Longitudinal	10x10x55	-50	-	97	145	137	50.0	126	-	-	-	90	95	95	1.14	1.39	1.35
50512	14-2897	Transversal	10x10x55	-50	-	193	180	164	27.0	179	-	-	-	100	95	95	1.61	1.54	1.49
50512	14-2898	Longitudinal	10x10x55	-50	-	159	150	142	50.0	150	-	-	-	95	95	95	1.54	1.47	1.49

Heat

Heat	Pieces	Length (m)	Weight (kg)
50352	5	-	-
50512	6	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91

Quality Control Representative
Eng. Iesanu Cristian

VGACEA 30.04.2014

ABS GALATZI

Inspector/Buyer representative

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004	Page 3/3 B 3395/1 30.04.2014	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 12.790 tons - lbs	Total Length: 105.41 meters - feets	Pieces 11	Bundles 3
Buyer's reference: PO NO. : 3200033675 REV.01	**Standard:** API 5L Ed.45/2012 -PSL 2 ; NORSOK M120 Ed. 5,November 2008-Y 22 Rev.5,June 2007; EN 10225-2009;TPS for EU -Stock Rev.04/04.04.2013				
Contract 50001507	Dimensions: 219.10 x 25.40 mm -	Schedule: -	Length: 8.00 - 10.00 m	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52N / S355G15+N
17	-		205	-	20.5	5	-

Remarks Steel manufacturing process.
Hot finished, steel is fully killed and produced by electric furnace. All steels shall be fully killed and made to fine grain practice, ArcelorMittal Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara
Heat treatment: normalizing at temperature :920÷940°C, time 17 min.
NDT full body: - 100% ultrasonic method,longitudinal,outside+inside with reference standard 5%(U2/c) notch- cf ISO10893/10– satisfactory.
- detection of laminar imperfection on the pipe body with 100% surface coverage (U3).- cf ISO10893/8– satisfactory.
Both pipe ends have been inspected over 400mm length by MPI method = satisfactory results
Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.
Heat no . 50352 Through Thickness Test Buletin No. 14-27
- Z ≥ 25% values: 72.96; 73.97; 72.74
- Z ≥ 35% values: 73.22
- UTS (N/mm²) values: 536.9 ; 545.1 ; 547.8

Heat no . 50512 Through Thickness Test Buletin No. 14-34
- Z ≥ 25% values: 74.25; 74.00; 74.49
- Z ≥ 35% values: 73.25
- UTS (N/mm²) values: 539.0 ; 556.3; 557.7

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 Romania

YGHUSA 30.04.2014

ABS GALATZI

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Inspector/Buyer representative

Formular 12A2, rev. 3

Inspection No – Prüf-Nr - Certificat No – N° di collaudo Blatt-Nr. – Sheet No – Page-N° – Pag-N°: 1 of 2

DTM 1520663/5

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

Customer – Besteller –Acheteur – Committente:	Part – Teil –Partie – Parte:	**incomplete**
	Order No – Bestell-Nr. –N° de la commande – N° dell'ordine:	**993-5403480600**
Manufacturer – Hersteller –Fabricant – Prcduttore:	dated – vom –date – in data:	**23.03.2015**
Vallourec Deutschland GmbH Düsseldorf / Germany	Works-No – Werks-Nr. – N° usine – Commessa N°:	**852/22422**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:

API Spec. 5 L, PSL 2, 12.2012 / ISO 3183:2012, PSL 2, VAD - SKH - X52N Mod. Rev. 1 Rev. Date 17.04.2015 and Elements of EN 10225:2009*

Material – Werkstoff –Matière – Materiale: according to – enstprechend –suivant – secondo: Edition – Ausgabe –Edizione:

X 52 N mod. / PSL2 (Grade L360N Mod., PSL2)/S355G15+N requirements as above

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:

Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:

Electro (EAF) except Items 17 and 30 - Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore:

LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:

VAD41 and VAD91 resp.

Marking – Kennzeichung –Marquage – Punzonature:

Material, Heat no.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pcs.	**Hot Finished Seamless Line Pipes (Ends bevelled, angle 30 degrees - Items 17, 30, 37, 40, 41, 44, 45, 46 and 47) (Ends plain, square cut, deburred - Items 36, 38, 39, 42, 48, 49 and 50)**		
17	**-14-**	**323,8 o.d. x 9,53 w.th. mm**	**238021**	**1721B, 1722B**
		Total length: 144,63 m Total weight: 10.870 kg	**268911**	**1703B, 1704B**
30	**-7-**	**406,4 o.d. x 12,7 w.th. mm**	**203474**	**4B, 5B**
		Total length: 77,86 m Total weight: 9.568 kg	**236137**	**11B, 12B**
36	**-3-**	**406,4 o.d. x 38,1 w.th. mm**	**184921**	**9904,**
		Total length: 31,54 m Total weight: 11.070 kg		**9982, 9982 1)**

Continued on next sheet

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

--

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisisiti richiesti cone da allegati.

--

Location – Ort –Lieu – Localita **Dortmund**

Date – Datum –Data **07 December 2015**

*** Norsok MDS-Y22 Rev. 5, 06-2007, NACE MR 0175/ISO 15156-2:2009 Paragraph A.2.1.2**

FOR THE SURVEYORS: M. MIELKE
Surveyor to Lloyd's Register EMEA

Works test certificate nos. 70155RS15, 70788RS15, 16186RP15, 16187RP15, 16202RP15, 16224RP15. 16203RP15. 16239RP15. 16169RP15. 16264RP15. 16265RP15. 16285RP15.*

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Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:

*** 16295RP15, 16296RP15, 16308RP15, 16309RP15 and 16330RP15.**

1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
37	-4-	457,2 o.d. x 25,4 w.th. mm Total length: 43,94 m Total weight: 11.970 kg	184921	9904, 9904 1) 9905
38	-3-	457,2 o.d. x 31,75 w.th. mm Total length: 32,05 m Total weight: 11.375 kg	184921	9904, 9905, 9905 1)
39	-4-	457,2 o.d. x 38,1 w.th. mm Total length: 41,45 m Total weight: 16.600 kg	183811 184922	9906, 9987 9906 1) 9907,9986, 9907 1)
40	-6-	508 o.d. x 12,7 w.th. mm Total length: 70,06 m Total weight: 11.420 kg	178895 183189	6051, 6455 6048, 8951
41	-3-	508 o.d. x 25,4 w.th. mm Total length: 35,03 m Total weight: 10.450 kg	184921	6052, 9904 6052 1)
42	-2-	508 o.d. x 31,75 w.th. mm Total length: 21,93 m Total weight: 8.460 kg	184922 185118	6054, 9907 6054 1) 6045, 6053 6053 1)
44	-5-	610 o.d. x 12,7 w.th. mm Total length: 57,23 m Total weight: 11.210 kg	184986	9992, 9993
45	-4-	610 o.d. x 15,9 w.th. mm Total length: 41,87 m Total weight: 9.975 kg	184986	9992, 9993
46	-4-	610 o.d. x 19,05 w.th. mm Total length: 43,58 m Total weight: 12.485 kg	184922 185118	9986, 9991 6053, 9990
47	-3-	610 o.d. x 25,4 w.th. mm Total length: 34,31 m Total weight: 12.990 kg	181450 183249 183811	8460, 9988 9371, 9989 9906, 9987
48	-2-	610 o.d. x 31,75 w.th. mm Total length: 20,31 m Total weight: 9.600 kg	184922	9986, 9991, 9986 1)
48	-1-	Length: 10,16 m Weight: 4.805 kg		
49	-3-	610 o.d. x 38,1 w.th. mm Total length: 26,73 m Total weight: 14.560 kg	183990	9452, 9985, 9985 1)
50	-1-	610 o.d. x 59,5 w.th. mm Length: 6,36 m Weight: 5.165 g	185177	6091, 6124, 6124 1)

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004 No. / Nr. : 16187RP15 (A03) Page/Seite: 1 / 9 Date/Datum: 14.09.2015

(A01) **Vallourec Deutschland GmbH**	(A08.1) **Vallourec-Order-No.** / Vallourec-Auftrags-Nr./ 85222422 (A08.2) **Suborder / Unterauftrag**
(A06.1) Customer / Kunde NICHT ERMITTELTE LAENDER	
(A06.2) **Orderer / Besteller**	(A07.2) **Orderer Order-No. / Besteller Bestell-Nr.** 993-5403480600 **Date / Datum** 23.03.2015

(B01, B02, B04) **Description of the product** **Erzeugnisbeschreibung**	HOT FINISHED SEAMLESS LINE PIPE SEAMLESS ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM TUBE ENDS CLOSED WITH PLASTIC CAPS RESP. PLASTIC PLUGS (AT MANUFACTURER´S CHOICE) INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH TUBES LOOSE NAHTLOSE STAHLROHRE, WARMGEFERTIGT (LEITUNGSROHRE) NAHTLOS ENDEN ABGESCHRAEGT, WINKEL 30 GRAD (TOLERANZ +5/-0 GRAD), STEGHOEHE 1,6 +/- 0,8 MM ROHRENDEN MIT KUNSTSTOFFKAPPEN BZW. -STOPFEN (IN WERKSWAHL) VERSCHLOSSEN INNEN OHNE ROSTSCHUTZ AUSSEN KLARLACK ROHRE LOSE API SPEC. 5 L, PSL 2, 12.2012 / ISO 3183:2012, PSL 2 VAD - SKH - X52N MOD. REV. 1 REV. DATE 17.04.2015 AND ELEMENTS OF EN 10225:2009 / NORSOK MDS-Y22 REV. 5, 06-2007 NACE MR 0175/ISO 15156-2:2009 PARAGRAPH A.2.1.2 X52N MODIFIED / PSL2 (GRADE L360N MOD, PSL2) / S355G15+N NORMALIZED NORMALGEGLUEHT
(A10) **Inspection by / Abnahme durch**	LLOYD´S REGISTER EMEA L.R.-EMEA-NO.: DTM 1520663

(A13) Vallourec Item **Position**	(A09) **Cust. Item Position**	(B14) **Item text** **Positionstext**	(B09) **Dimensions** **Abmessung**	(B10) **Single length** **Einzellänge**
37			O.D. 457,2 MM X WTH. 25,4 MM A.D. 457,2 MM X WD. 25,4 MM	IN LONG RANDOM MILL LENGTH 10000 - 12000 MM GROSSE HL 10000 - 12000 MM

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
		No. / Nr. : 16187RP15 (A03) Page/Seite: 2 / 9 Date/Datum: 14.09.2015

(A13) Vallourec Item **Position**	(A09) **Cust. Item Position**	(B08) Quantity Stück	(B11) Total length Gesamtlänge m	(B13) Weight Gewicht kg
37		4	43,94	11.970

Vallourec Item Position	**Delivery Note-No Lieferschein-Nr.**	**Packing list-No Packlisten-Nr.**
37	10578	

(C71)

HEAT CHEMICAL ANALYSIS / CHEMISCHE ANALYSE

(B07.1) Heat Schmelze	(B15) Process Erschmelz.	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.150	-	-	-	-	-	-	-	-
max	-	0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
184921	Electro (EAF)	0.130	0.360	1.46	0.013	0.0010	0.036	0.100	0.080	0.090	0.030

(B07.1) Heat Schmelze	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.100	0.0200	0.0200	0.020	0.050	0.0140	0.010	0.0005	0.0050	0.0100	.43	.25
184921	0.052	0.0070	0.0070	0.003	0.028	0.0090	0.002	0.0005	0.0004	0.0000	.42	.24

(B07.1) Heat Schmelze	EF 02 %	EF 10 %										
min	-	-										
max	0.120	0.800										
184921	0.083	0.300										

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

Heats fully killed

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004 No. / Nr. : 16187RP15 (A03) Page/Seite: 3 / 9 Date/Datum: 14.09.2015

(C71)

HEAT CHEMICAL ANALYSIS / CHEMISCHE ANALYSE

Beruhigter Stahl

AL >= 2,2 X N

Country of origin: Germany
Herkunftsland: Deutschland
RESIDUAL ELEMENTS IN LADLE ANALYSIS:
ARSENIC AS MAX.0,02 %
ANTIMONY SB MAX.0,01 %
BORON B MAX.0,0005 %
TIN SN MAX.0,015 %
LEAD PB MAX.0,01 %
BISMUTH BI MAX.0,01 %
CALCIUM CA MAX.0,005 %
NIOBIUM (NB) + VANADIUM (V) MAX 0,10 % IN LADLE AND PRODUCT
ANALYSIS
RESIDUAL ELEMENTS IN LADLE ANALYSIS:
ARSENIC AS MAX.0,02 %
ANTIMONY SB MAX.0,01 %
BORON B MAX.0,0005 %
TIN SN MAX.0,015 %
LEAD PB MAX.0,01 %
BISMUTH BI MAX.0,01 %
CALCIUM CA MAX.0,005 %
NIOBIUM (NB) + VANADIUM (V) MAX 0,10 % IN LADLE AND PRODUCT
ANALYSIS####
E-F3 = V + NB MAX. 0,100%
HEAT NO.: 184921
LADLE ANALYSIS : 0,080%
CHECK ANALYSIS : 0,079% SAMPLE-NO. 9905
CHECK ANALYSIS : 0,081% SAMPLE-NO. 9904
E-F3 = V + NB MAX. 0,100%
SCHMELZEN NR.: 184921
SCHMELZEN ANALYSE : 0,080%
KONTOLL ANALYSE : 0,079% PROBE-NR. 9905
KONTOLL ANALYSE : 0,081% PROBE-NR. 9904

(C72)

PRODUCT CHEMICAL ANALYSIS / PRODUKT CHEMISCHE ANALYSE

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
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(C72)

PRODUCT CHEMICAL ANALYSIS / PRODUKT CHEMISCHE ANALYSE

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.150	-	-	-	-	-	-	-	-
max		0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
184921	9904	0.125	0.361	1.39	0.011	0.0009	0.034	0.107	0.081	0.090	0.025
184921	9905	0.130	0.355	1.39	0.011	0.0009	0.036	0.105	0.079	0.090	0.025

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.100	0.0200	0.0200	0.020	0.050	0.0140	0.010	0.0005	0.0050	0.0100
184921	9904	0.052	0.0058	0.0050	0.003	0.029	0.0096	0.001	0.0002	0.0002	0.0010
184921	9905	0.051	0.0060	0.0060	0.003	0.028	0.0097	0.001	0.0002	0.0004	0.0010

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	CQ 03 %	CQ 08 %	EF 02 %	EF 10 %						
min		-	-	-	-						
max		.43	.25	0.120	0.800						
184921	9904	.40	.23	0.084	0.303						
184921	9905	.41	.23	0.082	0.299						

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

Type / Form (C10.1)	ROUND TEST SPECIMEN / RUNDPROBE
Test temperature / Prüftemperatur (C03)	ROOM TEMPERATURE / RAUMTEMPERATUR
Direction / Richtung (C02)	longitudinal / längs
Location / Lage (C01.1)	MIDDLE CONCERNING WALL / MITTE BEZOGEN AUF DIE ROHRWAND

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
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TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C10) Diameter Durchmesser	(C11) YS Streckgr.	(C12) TS Zugfest.	(C13) Elong. Dehnung	(C14.1) Ratio Verhältn.					
		mm	$R_{p0,2}$ MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -					
min		-	345	460	22.0	-					
max		-	-	620	-	0.88					
184921	9904	13.98	395	524	30.5	0.75					

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

Type / Form (C10.1)	ROUND TEST SPECIMEN / RUNDPROBE
Test temperature / Prüftemperatur (C03)	ROOM TEMPERATURE / RAUMTEMPERATUR
Direction / Richtung (C02)	TTT / D.Wand

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C10) Diameter Durchmesser	(C12) TS Zugfest.	(C15) Red.Area Einschn.							
		mm	R_m MPa	Z %							
min		-	460	-							
max		-	620	-							
184921	9904 1)	09.96	538	74							
184921	9904 1)	09.96	537	74							
184921	9904 1)	09.97	537	75							

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

Type / Form (C10.1)	ROUND TEST SPECIMEN / RUNDPROBE
Test temperature / Prüftemperatur (C03)	ROOM TEMPERATURE / RAUMTEMPERATUR
Direction / Richtung (C02)	longitudinal / längs
Location / Lage (C01.1)	MIDDLE CONCERNING WALL / MITTE BEZOGEN AUF DIE ROHRWAND

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004 No. / Nr. : 16187RP15 (A03) Page/Seite: 6 / 9 Date/Datum: 14.09.2015

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C10) Diameter Durchmesser	(C11) YS Streckgr.	(C12) TS Zugfest.	(C13) Elong. Dehnung	(C14.1) Ratio Verhältn.					
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -					
min		-	360	460	20.5	-					
max		-	530	760	-	0.93					
184921	9904	12.53	393	520	35.5	0.76					

1) TENSILE TEST WALLTHICKNESS TENSILE STRENGTH MAX. 368 MPA
AVERAGE VALUE CLASS Z 35 ACC. TO EN 10164 MIN. 35%.
1) ZUGVERSUCH WANDDICKENRICHTUNG FESTIGKEIT MAX. 368 MPA
MITTELWERT BRUCHEINSCHNUERUNG GUETEKLASSE Z 35
GEM. EN 10164 MIN. 35%.

IMPACT TEST RESULTS / ERGEBNISSE DES KERBSCHLAGBIEGEVERSUCHS

Type / Form (C40)	Charpy-V / Charpy-V
Test temperature / Prüftemperatur (C03)	- 50 DEGREES C
Direction / Richtung (C02)	transverse / quer

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C41)	(C42.1) Impact1 Arbeit1	(C42.1) Impact2 Arbeit2	(C42.1) Impact3 Arbeit3	(C43.3) Mean Mittelw.					
		qcm	J	J	J	J					
min		-	38.0	38.0	38.0	50.0					
max		-	-	-	-	-					
184921	9904	0.800	299	307	310	305					

HARDNESS TEST RESULTS / ERGEBNISSE DER HAERTEPRUEFUNG

Location / Lage (C01.1)	MIDDLE CONCERNING WALL / MITTE BEZOGEN AUF DIE ROHRWAND

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
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HARDNESS TEST RESULTS / ERGEBNISSE DER HAERTEPRUEFUNG

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C31) Value	(C31) Value								
		HV	HV								
min max		- 248.0	- 248.0								
184921	9904	161.0	161.0								

(D55)

OTHER TESTS ON PIPE / SONSTIGE PRUEFUNGEN

Test Prüfung	Conditions Prüfbedingungen	Test rate Prüfumfang	Result Ergebnis
HEAT TREATMENT WAERMEBEHANDLUNG	NORMALIZED NORMALISIERT	5 MIN 910 DEGREES C AIR 5 MIN 910 GRAD C LUFT	
HYDROSTATIC TEST INNENDRUCKVERSUCH MIT WASSER	205 BAR (1BAR=100KPA), HOLDING TIME 5 SEC. 205 BAR (1BAR=100KPA), HALTEZEIT 5 SEC.	EACH PIPE/ TUBE JE ROHR	NO LEAKAGE BESTANDEN
APPEARANCE AND DIMENSIONS (D01) OBERFLAECHENBESCHAFFEN-HEIT UND MASSE (D01)		EACH PIPE/ TUBE JE ROHR	SATISFACTORY BESTANDEN
HARDNESS TEST HAERTEPRUEFUNG		HRC MAX. 22 HRC MAX. 22	GUARANTEED GARANTIERT
BECAUSE THE HARDNESS IS TOO LOW THE HARDNESS TEST ACC. TO ROCKWELL C IS NOT POSSIBLE, SO THE TEST METHOD WILL BE HV 10 HAERTEPRUEFUNG NACH VERFAHREN ROCKWELL C NICHT MOEGLICH WEGEN DER VORHANDENEN NIEDRIGEN HAERTE. DESHALB PRUEFUNG NACH HV 10			

.

UT-TEST ACC.TO EN ISO 10893-10, CLASS U2/C
AND API SPEC 5L, ANNEX E, INSIDE AND OUTSIDE,
WHOLE LENGTH, RECTANGULAR-NOTCH, DEPTH 5,0%,
MIN. 0,3 MM UND MAX. 3,0 MM, WIDTH MAX. 1,0 MM,
TESTNOTCH-LENGTH: MAX. 50 MM, OF LONGITUDINAL DEFECTS:
WITHOUT OBJECTION

.

UT-TEST ACC. TO EN ISO 10893-8, CLASS U3
AND API SPEC 5L, ANNEX E, WHOLE LENGTH AND PIPE ENDS,
OF LAMINATION: WITHOUT OBJECTION

222/ 3402

.

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
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(D55)

OTHER TESTS ON PIPE / SONSTIGE PRUEFUNGEN

TEST OF RESTMAGNETISM ACC. TO API 5L MAX. 30 GAUSS:
WITHOUT OBJECTION
.
.
US-PRUEFUNG NACH EN ISO 10893-10, ZULAESSIGKEITSKLASSE U2/C
UND API SPEC 5L, ANLAGE E, INNEN UND AUSSEN,
GESAMTE ROHRLAENGE, RECHTECKNUT, FEHLERTIEFE 5,0%,
MIN. 0,3 MM UND MAX. 3,0 MM, BREITE MAX. 1,0 MM,
TESTNUT-LAENGE: MAX. 50 MM, AUF LAENGSFEHLER: OHNE BEFUND
.
US-PRUEFUNG NACH EN ISO 10893-8, ZULAESSIGKEITSKLASSE U3
UND API SPEC 5L, ANLAGE E, GESAMTE ROHRLAENGE,
UND ROHRENDEN, AUF DOPPLUNGEN: OHNE BEFUND
.
MESSUNG AUF RESTMAGNETISMUS NACH API 5L MAX. 30 GAUSS:
OHNE BEFUND
.

(A04, B06)

MARKING, IDENTIFICATION / KENNZEICHNUNG, IDENTIFIZIEREN

37	VALLOUREC	DIE STAMPED BOTH SIDES ROUND NOSE TOOLS VALLOUREC LOGO MANUFACTURER´S NAME MANUFACTURER´S MARK MONTH/YEAR X52N MOD PSL 2 ISO 3183 L360N MOD PSL 2 EN 10225 S355G15+N HEAT-NO. WA INSPECTORS BRAND LR DTM MM PAINT STENCILED ON ONE SIDE VALLOUREC LOGO MANUFACTURER´S NAME MANUFACTURER´S MARK PROCESS OF MANUFACTURE SMLS MONTH/YEAR 457,2 X 25,4 X52 B MOD PSL 2 ISO 3183 L360N MOD PSL 2 EN 10225 S355G15+N HEAT-NO. TUBE/PIPE LENGTH M 85222422 VLR ITEM-NO 37 PIPE NO. (TALLY-NR.) WA INSPECTORS BRAND LR DTM MM CUSTOMER ORDER-NO. 993-5403480600 COUNTRY OF ORIGIN GERMANY
37	VALLOUREC	BEIDSEITIG STAHLGESTEMPELT ABGERUNDETE STEMPEL VALLOUREC LOGO HERSTELLERNAME HERSTELLERZEICHEN MONAT/JAHR X52N MOD PSL 2 ISO 3183 L360N MOD PSL 2 EN 10225 S355G15+N SCHMELZEN-NR. WA ZEICHEN DER FREMDABNAHME LR DTM MM EINSEITIG SCHABLONIERT VALLOUREC LOGO HERSTELLERNAME HERSTELLERZEICHEN HERSTELLVERFAHREN SMLS MONAT/JAHR 457,2 X 25,4 X52 B MOD PSL 2 ISO 3183 L360N MOD PSL 2 EN 10225 S355G15+N SCHMELZEN-NR. ROHREINZELLAENGE M 85222422 POSITIONS-NR. 37 LFD. ROHR-NR. WA ZEICHEN DER FREMDABNAHME LR DTM MM BESTELL-NR. BESTELLER 993-5403480600 URSPRUNGSLAND GERMANY

(Z01)

The supplied products are in compliance with the requirements of the order

Die gelieferten Erzeugnisse stimmen mit den Anforderungen des Auftrages überein

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004
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(A05, Z02, Z03, Z04)

Date / Datum	14.09.2015	
Validated by Bestätigt durch	Inspection Representative Abnahmebeauftragter	Third Party Representative Beauftragter Fremdabnehmer
	FUHRMANN	
☎	+49(0)2119603545	
🖷	+49(0)2119602213	
@	CERTIFICATES-RA-PILGER@VALLOUREC.COM	
Stamp / Stempel		

Indication in parentheses correspond to attributes according to EN 10168

Die Bezeichnungen in Klammern entsprechen den Kennnummern gemäss EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

Dieses Zeugnis bzw. diese Bescheinigung darf weder verändert noch für andere Erzeugnisse verwendet werden. Zuwiderhandlungen werden als Urkundenfälschung und Betrug strafrechtlich verfolgt.

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.2 EN 10204:2004 No. / Nr. : 16187RP15 (A03) Page/Seite: 9 / 9 Date/Datum: 14.09.2015

(A05, Z02, Z03, Z04)

Date / Datum	14.09.2015	
Validated by Bestätigt durch	Inspection Representative Abnahmebeauftragter	Third Party Representative Beauftragter Fremdabnehmer
	FUHRMANN	Maik Mielke Dortmund Office Lloyd's Register EMEA
☎	+49(0)2119603545	
🖷	+49(0)2119602213	
@	CERTIFICATES-RA-PILGER@VALLOUREC.COM	
Stamp / Stempel		

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Vallourec Deutschland GmbH Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	**TUBE/ PIPE LIST** **EINZELROHR - LISTE** No./ Nr. : 16187RP15 Page/ Seite : 1 / 1 Date/ Datum : 14.09.2015

Customer /Kunde NICHT ERMITTELTE LAENDER **Customer Order-No. /Kunde Bestell-Nr.** **Item /Position**	**Vallourec-Order-No. / Vallourec-Auftrags-Nr.** 85222422 **Item / Position** 37 **Suborder / Unterauftrag**

Tally-No Tally-Nr.	Tube/Pipe-No. Rohr-Nr.	Heat Schmelze	Test Piece Prüfstück	Single length Einzellänge M	Single length Einzellänge FT	Weight Gewicht KG	Weight Gewicht LBS
1	0	184921		11,520	37,795	3135	6911
2	0	184921		11,450	37,566	3080	6790
3	0	184921		10,850	35,597	2990	6592
4	0	184921		10,120	33,202	2765	6096
Summary **Summe**				43,940	144,160	11970	26389

Inspection Certificate

Project: --

Client:

Office: **Hamburg**

Client's Order Number: **435413-2**

Date: **23 October 2018**

Order Status: **complete**

Inspection Dates

First: **05 September 2018**

Final: **04 October 2018**

This certificate is issued to **the above client to certify that a surveyor to Lloyd's Register did, at their request, attend the undermentioned manufacturer for the purpose of inspecting and witnessing tests on the product listed below.**

References

Manufacturer: **Vallourec Deutschland GmbH, Düsseldorf-Rath / Germany**
Manufacturer's order no.: **860/0473**

Description: **Hot finished seamless steel pipe**

Material: **X52N (Grade L360N, PSL2)**
Specification: **API Spec. 5 L, PSL 2, 12.2012 / ISO 3183:2012, PSL 2, VAD-MEC-LY01, REV 8, 2014-02-26, ***

***For further details please refer to manufacturer's works test certificate 24966RP18.**

Method of manufacture: **hot rolled**
Stage of manufacturing: **as rolled**
Heat treatment: **normalized**

Item no.	Quantity (pcs.)	Dimensions (mm)	Total Length (m)	Total Weight (kg)	Heat nos.	Test nos.
01	-6-	559 x 25.4	68,85	23.680	194074	4A,
					194574	5A,
					195242	2A, 3B
					198784	1A
					199009	6B

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The following examinations were carried out with satisfactory results in accordance with the above listed order number and specification:

- **Selected and marked test specimen.**
- **Witnessed mechanical material tests.**
- **Hydraulic Test monitored continuously.**
- **Ultrasonic Test monitored continuously.**
- **Visual Examination.**
- **Verified dimensional examinations.**
- **Reviewed chemical analysis and works test certificates stamped and signed accordingly.**

Identification (hard stamped):
LR DTM MM, Heat no., Works brand, Material,
Month/Year, Specification



EN/DBR

For S. Schumacher and D. Brühl
Surveyors to Lloyd's Register EMEA

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Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 24966RP18 (A03) Page: 1 / 9 Date: 04.10.2018

Please scan this QR Code with your device to access the Vallourec inspection certificate check site or send an email to valguard@vallourec.com

(A01) **Vallourec Deutschland GmbH**	(A08.1) **Vallourec-Order-No.** 249390 (A08.2) **Suborder** 86004739
(A06.1) **Consignee**	
(A06.2) **Orderer**	(A07.2) **Orderer Order-No.** 435413-2 04.07.2018
(B01, B02, B04) **Description of the product**	Hot finished seamless steel pipes API 5L / ISO 3183 , PSL 2, 2012 EN 10225, 2009 Norsok MDS-Y22* rev 5, June 2007 and Norsok MDS-Y27* rev 4, June 2007##(*without qualification paragraph and without surface protection paragraph) NACE MR0175 / ISO 15156-2 : 2009, annex A.2.1.2 Norsok MDS-C22, Rev. 5, October 2013 With API monogram VAD-MEC-LY01, Rev. 8, February 26-2014 L360N / X52N, API 5L / ISO 3183, PSL 2 S355G14+N, EN 10225 S355G15+N, EN 10225 Ends bevelled,angle 30° (+5 °/ -0), root face 1.6 mm (± 0.8 mm) Outside with dry varnish Without inside rust protection Tube ends closed by plastic plugs, or plastic caps, in mill's choice
(A10) **Inspection by** LLOYD'S REGISTER EMEA DTM-N0.: 1820621	

(A13) Vallourec Item	(A09) **Orderer Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
1		ARTICLE NUMBER 11412100	API 5L OD 559 x WT 25.4 mm OD Tol ± 0.75 % WT Tol. : -10 % + 3.7 mm, localised -3 mm + 4.97 mm allowed	Random length from 10000 to 12000 mm

(A13) Vallourec Item	(A09) **Orderer Item**	(B08) Quantity	(B11) Total length m	(B13) Weight kg
1		6	68.85	23.680

Lloyd's Register EMEA
Dirk Brüh
Hamburg Office
Lloyd's Register

Vallourec Deutschland GmbH (A01)
Werk Rath-Pilger
Rather Kreuzweg 106
40472 DÜSSELDORF
GERMANY

vallourec

INSPECTION CERTIFICATE (A02)
3.2 EN 10204:2004

No. : 24966RP18 (A03)

Date: 04.10.2018

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(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.150	-	-	-	-	-	-	-	-
max	-	0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
194074	Electro (EAF)	0.140	0.360	1.40	0.010	0.0010	0.046	0.070	0.090	0.060	0.020
194574	Electro (EAF)	0.126	0.380	1.43	0.013	0.0010	0.033	0.120	0.130	0.070	0.030
195242	Electro (EAF)	0.140	0.320	1.40	0.015	0.0010	0.039	0.140	0.110	0.080	0.020
198784	Electro (EAF)	0.120	0.350	1.45	0.009	0.0010	0.041	0.110	0.150	0.070	0.040
199009	Electro (EAF)	0.120	0.330	1.43	0.015	0.0010	0.034	0.170	0.140	0.100	0.040

(B07.1) Heat	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.100	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100	.43	.25
194074	0.044	0.0040	0.0060	0.004	0.030	0.0090	0.001	0.0005	0.0003	0.0000	.41	.24
194574	0.069	0.0040	0.0060	0.003	0.025	0.0090	0.002	0.0003	0.0005	0.0000	.42	.23
195242	0.048	0.0060	0.0080	0.004	0.034	0.0090	0.002	0.0005	0.0006	0.0000	.42	.24
198784	0.048	0.0040	0.0050	0.003	0.031	0.0110	0.001	0.0003	0.0004	0.0000	.42	.23
199009	0.053	0.0060	0.0090	0.003	0.025	0.0100	0.001	0.0004	0.0003	0.0000	.42	.23

(B07.1) Heat	EF 02 %	EF 01 %
min	-	-
max	0.100	0.100
194074	0.078	0.074
194574	0.097	0.094
195242	0.086	0.082
198784	0.082	0.079
199009	0.081	0.078

CQ 03	CE (IIW) = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
CQ 08	PCM = C+Si/30+(Mn+Cu+Cr)/20+Ni/60+Mo/15+ PCM = C+Si/30+(Mn+Cu+Cr)/20+Ni/60+Mo/15+V/10+5B
EF 02	V+Nb+Ti
EF 01	Nb+V

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		No. : 24966RP18 (A03) Page: 3 / 9 Date: 04.10.2018

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(C71)

HEAT CHEMICAL ANALYSIS

Heats fully killed

AL >= 2 X N

Country of steel (melt) origin: Germany
PMI Test (Positive Material Identification), each Pipe/Tube: Satisfactory
FULLY KILLED FINE GRAIN STEEL AND DESULPHURIZED
•
HEAT + PRODUCT ANALYSIS: SB MAX. = 0,0100%
HEAT-NO. 194074 = 0,0019%
CHECK ANALYSIS SAMPLE NO. 115150 = 0,0010%
CHECK ANALYSIS SAMPLE NO. 115151 = 0,0010%
•
HEAT-NO. 195242 = 0,0023%
CHECK ANALYSIS SAMPLE NO. 116431 = 0,0010%
CHECK ANALYSIS SAMPLE NO. 116480 = 0,0010%
•
HEAT-NO. 198784 = 0,0017%
CHECK ANALYSIS SAMPLE NO. 116481 = 0,0010%
CHECK ANALYSIS SAMPLE NO. 117020 = 0,0010%
•
HEAT-NO. 194574 = 0,0019%
CHECK ANALYSIS SAMPLE NO. 116484 = 0,0010%
CHECK ANALYSIS SAMPLE NO. 116485 = 0,0010%
•
HEAT-NO. 199009 = 0,0022%
CHECK ANALYSIS SAMPLE NO. 116486 = 0,0010%
CHECK ANALYSIS SAMPLE NO. 116487 = 0,0010%
•
EF3: CR + MO + NI + CU MAX. = 0,800%
HEAT-NO. 194074
LADLE ANALYSIS: = 0,240%
CHECK ANALYSIS SAMPLE NO.116482 = 0,240%
CHECK ANALYSIS SAMPLE NO.116483 = 0,256%
•
HEAT-NO. 194574
LADLE ANALYSIS: = 0,350%
CHECK ANALYSIS SAMPLE NO.116484 = 0,446%
CHECK ANALYSIS SAMPLE NO.116485 = 0,451%
•
HEAT-NO. 195242
LADLE ANALYSIS: = 0,350%
CHECK ANALYSIS SAMPLE NO.116431 = 0,353%
CHECK ANALYSIS SAMPLE NO.116480 = 0,355%
•
HEAT-NO. 198784

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(C71)

HEAT CHEMICAL ANALYSIS

LADLE ANALYSIS: = 0,370%
CHECK ANALYSIS SAMPLE NO.116481 = 0,382%
CHECK ANALYSIS SAMPLE NO.117020 = 0,379%
*
HEAT-NO. 199009
LADLE ANALYSIS: = 0,450%
CHECK ANALYSIS SAMPLE NO.116486 = 0,351%
CHECK ANALYSIS SAMPLE NO.116487 = 0,348%

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.150	-	-	-	-	-	-	-	-
max		0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
194074	4A	0.154	0.367	1.36	0.009	0.0015	0.041	0.075	0.091	0.068	0.022
194074	4A	0.155	0.368	1.36	0.009	0.0018	0.041	0.075	0.091	0.069	0.022
194574	5A	0.129	0.337	1.42	0.014	0.0006	0.029	0.176	0.125	0.106	0.039
194574	5A	0.128	0.341	1.43	0.015	0.0005	0.030	0.179	0.126	0.106	0.040
195242	2A	0.143	0.331	1.38	0.013	0.0005	0.038	0.143	0.101	0.087	0.022
195242	3B	0.146	0.329	1.38	0.013	0.0005	0.037	0.145	0.100	0.087	0.023
198784	1A	0.127	0.375	1.45	0.009	0.0007	0.041	0.117	0.144	0.077	0.044
198784	1A	0.125	0.375	1.44	0.009	0.0008	0.041	0.117	0.143	0.077	0.042
199009	6B	0.138	0.391	1.43	0.012	0.0025	0.030	0.128	0.122	0.073	0.028
199009	6B	0.135	0.389	1.43	0.012	0.0019	0.030	0.127	0.121	0.072	0.028

(B07.1) Heat	(C00.1) Test Piece	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.100	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100
194074	4A	0.044	0.0033	0.0040	0.004	0.032	0.0104	0.001	0.0005	0.0001	0.0010
194074	4A	0.044	0.0034	0.0040	0.003	0.032	0.0104	0.001	0.0005	0.0001	0.0010
194574	5A	0.054	0.0056	0.0080	0.003	0.027	0.0118	0.001	0.0004	0.0001	0.0010
194574	5A	0.055	0.0058	0.0080	0.003	0.029	0.0108	0.001	0.0004	0.0001	0.0010
195242	2A	0.049	0.0053	0.0070	0.004	0.037	0.0098	0.001	0.0003	0.0002	0.0010
195242	3B	0.049	0.0055	0.0070	0.004	0.036	0.0102	0.001	0.0003	0.0001	0.0010
198784	1A	0.050	0.0041	0.0040	0.002	0.034	0.0119	0.001	0.0001	0.0001	0.0011
198784	1A	0.050	0.0041	0.0040	0.002	0.034	0.0115	0.001	0.0001	0.0001	0.0010
199009	6B	0.069	0.0043	0.0060	0.003	0.027	0.0108	0.001	0.0001	0.0002	0.0010
199009	6B	0.069	0.0040	0.0050	0.003	0.026	0.0112	0.001	0.0001	0.0002	0.0010

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(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	CQ 03 %	CQ 08 %	EF 02 %	EF 01 %						
min max		- .43	- .25	- 0.100	- 0.100						
194074	4A	.42	.25	0.080	0.076						
194074	4A	.42	.25	0.079	0.076						
194574	5A	.43	.24	0.084	0.081						
194574	5A	.43	.24	0.087	0.084						
195242	2A	.42	.24	0.090	0.086						
195242	3B	.43	.25	0.089	0.085						
198784	1A	.43	.23	0.086	0.084						
198784	1A	.42	.23	0.086	0.084						
199009	6B	.43	.25	0.099	0.096						
199009	6B	.43	.24	0.098	0.095						

CQ 03	CE (IIW) = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
CQ 08	PCM = C+Si/30+(Mn+Cu+Cr)/20+Ni/60+Mo/15+ PCM = C+Si/30+(Mn+Cu+Cr)/20+Ni/60+Mo/15+V/10+5B
EF 02	V+Nb+Ti
EF 01	Nb+V

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal
Location (C01.1)	MIDDLE CONCERNING WALL

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TENSILE TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece		(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
			$R_{t0,5}$ MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -					
min			345	460	22.0	-					
max			-	620	-	0.88					
194074	4A		378	529	29.0	0.71					
194574	5A		415	544	28.5	0.76					
195242	3B		382	524	30.0	0.73					
198784	1A		395	532	30.0	0.74					
199009	6B		397	537	29.0	0.74					

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	TTT

(B07.1) Heat	(C00.1) Test Piece		(C12) TS	(C15) Red.Area							
			R_m MPa	Z %							
min			460	-							
max			620	-							
194074	4A		549	72							
194074	4A		554	72							
194074	4A		549	72							
194574	5A		563	73							
194574	5A		564	72							
194574	5A		564	67							
195242	3B		540	74							
195242	3B		543	74							
195242	3B		542	74							
198784	1A		548	74							
198784	1A		550	75							
198784	1A		549	74							
199009	6B		555	73							
199009	6B		556	73							
199009	6B		557	73							

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TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal
Location (C01.1)	MIDDLE CONCERNING WALL

(B07.1) Heat	(C00.1) Test Piece		(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
			$R_{t0.5}$ MPa	R_m MPa	2" %	R/R_m -					
min			360	460	21.0	-					
max			530	760	-	0.93					
194074	4A		376	537	32.5	0.70					
194574	5A		413	552	32.5	0.75					
195242	3B		379	528	33.0	0.72					
198784	1A		401	537	34.5	0.75					
199009	6B		401	542	33.5	0.74					

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece		(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean	(C42.2) Shear fr1	(C42.2) Shear fr2	(C42.2) Shear fr3		
			J	J	J	J	%	%	%		
min			38.0	38.0	38.0	50.0	-	-	-		
max			-	-	-	-	-	-	-		
194074	4A		100	99.0	94.0	97.6	15	15	10		
194574	5A		90.0	91.0	71.0	84.0	15	15	10		
195242	3B		83.0	163	166	137	10	55	55		
198784	1A		173	179	195	182	70	70	90		
199009	6B		145	131	141	139	40	35	40		

HARDNESS TEST RESULTS

Location (C01.1)	MIDDLE CONCERNING WALL

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HARDNESS TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C31) Value	(C31) Value								
		HB	HB								
min max		- 237.0	- 237.0								
194074	4A	163.0	160.0								
194574	5A	164.0	167.0								
195242	3B	160.0	161.0								
198784	1A	162.0	160.0								
199009	6B	164.0	168.0								

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT	NORMALIZED	5 MIN 910 DEGREES C AIR	
HYDROSTATIC TEST	205 BAR (1BAR=100KPA). HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
RESIDUAL MAGNETISM	MAX 30 GAUSS		SATISFACTORY

ULTRASONIC TEST FOR LONGITUDINAL DEFECTS, INSIDE AND OUTSIDE, ACCORDING TO API 5L, ANNEX E, ASTM E 213-14E1, EN 10246-7, ISO 10893-10, ACCEPTANCE LEVEL U2, SUBCATEGORY C, RECTANGULAR REFERENCE NOTCH, DEPTH 5 %, MIN. 0.3 MM, MAX. 1.5 MM, WIDTH MAX. 1 MM, LENGTH MAX. 50 MM, EACH PIPE, 100%, FULL LENGTH: SATISFACTORY.

•

ULTRASONIC TEST FOR LAMINATION, ACCORDING TO API 5L, ANNEX E, EN 10246-14, ACCEPTANCE LEVEL U3, EACH PIPE, 100 %, FULL LENGTH: SATISFACTORY.

•

ULTRASONIC TEST FOR WALL THICKNESS, ACCORDING TO API 5L, ANNEX E, ISO 10893-12, EACH PIPE, 100 %, FULL LENGTH: SATISFACTORY.

•

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(A04, B06)

MARKING, IDENTIFICATION

VALLOUREC DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS VALLOUREC LOGO VALLOUREC API SPEC 5L 5L0302 API-MONOGRAM MONTH/YEAR TERMS OF DELIVERY ISO3183 X52N/L360N PSL2 INSPECTORS BRAND LR DTM MM HEAT-NO. TERMS OF DELIVERY EN10225 S355G14+N/S355G15+N WA PAINT STENCILED ON ONE SIDE VALLOUREC LOGO VALLOUREC API SPEC 5L 5L0302 API-MONOGRAM MONTH/YEAR TERMS OF DELIVERY ISO3183 559

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 24966RP18 (A03) Page: 9 / 9 Date: 04.10.2018

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(A04, B06)

MARKING, IDENTIFICATION

25.4 X52N/L360N PSL2 PROCESS OF MANUFACTURE SMLS
HEAT-NO. TERMS OF DELIVERY EN10225 S355G14+N/S355G15+N
PIPE NO. (TALLY-NR.) MILL REFERENCE ORDER NO. 86004739
TUBE/PIPE LENGTH M WA UNIQUE PIPE-NO. CUSTOMER
ORDER-NO. 435413-2 249390 VLR ITEM-NO 1
COUNTRY OF ORIGIN GERMANY

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	04.10.2018	
Validated by	Inspection Representative	Third Party Representative
	FUHRMANN	
☎	+49(0)2119603545	
🖷	+49(0)2119602800	
@	CERTIFICATES-RA-PILGER@VALLOUREC.COM	
Stamp		

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

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Dirk Bruhn
Hamburg Office

Vallourec Deutschland GmbH Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	**TUBE/ PIPE LIST** No. : 24966RP18 Page : 1 / 1 Date : 04.10.2018

Customer **Orderer Order-No.** **Item**	**Vallourec-Order-No.** 249390 **Item** 1 **Suborder** 86004739

Tally-No	Tube/Pipe-No.	Heat	Test Piece	Single length M	Single length FT	Weight KG	Weight LBS
1	1	198784		11,530	37,828	3925	8653
2	2	195242		11,890	39,009	4075	8984
3	3	195242		11,670	38,287	4020	8863
4	6	199009		11,440	37,533	3980	8774
5	5	194574		11,620	38,123	3980	8774
6	4	194074		10,700	35,105	3700	8157
Summary				68,850	225,885	23680	52205

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Hamburg Office
Lloyd's Register

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR. BL 15, SC. A. PARTER I
ROMAN. NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

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B 10611/1 Rev. 1

10.07.2017

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS
NETHERLANDS B.V.
MANNESMANNWEG 5, 4794SL
HEIJNINGEN NETHERLANDS

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.107 tons - lbs	70.40 meters - feets	6	-

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;

Buyer's reference: PO NO.: 3200048174

Contract 50002793

Dimensions: 323.90 x 19.10 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
9	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
1161693		Heat analysis		0.14	1.25	0.21	0.003	0.013	0.06	0.09	0.14	0.006	0.032	0.01	0.069	0.002	0.002	0.0020	0.0003	0.0050	0.0090	0.0010	0.0010	0.0050
1161693	16-1459	Product analysis		0.14	1.25	0.21	0.005	0.013	0.06	0.09	0.14	0.007	0.034	0.01	0.068	0.002	0.000	0.0015	0.0000	0.0050	0.0000	0.0020	0.0000	0.0000
1161693	16-1459	Product analysis		0.14	1.24	0.20	0.005	0.012	0.06	0.09	0.15	0.006	0.033	0.01	0.068	0.002	0.000	0.0017	0.0000	0.0050	0.0000	0.0020	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
1161693		Heat analysis		6.40	0.071	0.073	0.292	0.39
1161693	16-1459	Product analysis		6.80	0.070	0.070	0.300	0.39
1161693	16-1459	Product analysis		6.60	0.070	0.070	0.310	0.39

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$

$CE_S = C+Mn/6$

$CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

RINA 25.08.2017 GALATI

Stamped based on report no 6732098/7

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damo[illegible]

ArcelorMittal Tubular Products Roman S.A. Romania

Inspector/Buyer representative

Formular 12A[illegible]

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN. NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/4 B 10611/1 Rev. 1 10.07.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 10.107 tons - lbs	Total Length: 70.40 meters - feets	Pieces 6	Bundles -

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;

Buyer's reference PO NO.: 3200048174	Dimensions: 323.90 x 19.10 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -
Contract 50002793				

Item	Item Client
9	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1161693	Longitudinal Flat	50.8	-	40.00	-	19.40	-	776.0	-	16-2726	457.00	-	567.00	-	39.40	0.81
1161693	Longitudinal Flat	-	-	20.00	-	19.70	-	394.0	-	16-2501	454.30	-	563.50	-	38.60	0.81

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1161693	16-5338	Transversal	10x10x55	-50	20.0	394	404	413	27.0	404	-	-	-	100	100	100	2.26	2.29	2.33
1161693	16-5339	Longitudinal	10x10x55	-50	-	413	421	407	50.0	414	-	-	-	100	100	100	2.33	2.37	2.30

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1161693	16-1967	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
1161693	6	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Dumac Ciprian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal 1/2768/91 România

Inspector/Buyer representative

GABS GALATI 25.08.2017 Stamped based on report GT 3209/17

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN. NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 10611/1 Rev. 1 10.07.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 10.107 tons - lbs	Total Length: 70.40 meters - feets	Pieces 6	Bundles -

Buyer's reference PO NO.: 3200048174	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;		
Contract 50002793	Dimensions: 323.90 x 19.10 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH -
9	-		205	-	20.5	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 19.10 -

API 5L/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -17-0038/CPD/BUC 10 00067/A

Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace. All steels shall be fully killed and made to fine grain practice, source G300706 .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 870-880°C, time soaking 42 min.
NDT full body:
- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface - acc. ISO 10893/12-satisfactory
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage ≥ 20% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-acc. ISO 10893/10-satisfactory.
-ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
-wet magnetical particles testing on the pipe ends – satisfactory.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

ArcelorMittal J27/88/91 Romania Products Roman S.A.

Formular 12A2, rev. 3

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

17
0038/CPD/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

ABS GALATI 25.08.2017

Inspector/Buyer representative

Stamped based on report no GT 320 9814

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN. NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -					Page 4/4 **B 10611/1 Rev. 1** **10.07.2017**		ArcelorMittal
Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS		SEAMLESS STEEL LINE PIPES					Total weight: 10.107 tons - lbs	Total Length: 70.40 meters - feets	Pieces: 6 Bundles: -
Buyer's reference: PO NO.: 3200048174		**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;							
Contract 50002793		Dimensions: 323.90 x 19.10 mm -		Schedule: -			Length: 10.00 - 12.00 m -	-	
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH -		
9	-		205	-	20.5	5			

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.
Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

ABS GALATI 25.08.2017
Stamped based on report
GT-3207817

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J21/188/97 Romania

Quality Control Representative
Eng. Damoc Cibrian

Inspector/Buyer representative

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 1/5 **D 4971/1** **27.12.2018**	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 13.196 tons - lbs	Total Length: 57.45 meters - feets	Pieces: 5 / Bundles: -
Buyer's reference: PO.NO.: 3200060371 **Contract 50003718**	**Standard:** API 5L ed.46-2018-PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015			
	Dimensions: 508.00 x 19.05 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
14	-		205	-	20.5	5	-
			Bill: -				Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
1815479		Heat analysis		0.13	1.22	0.21	0.002	0.009	0.09	0.06	0.13	0.004	0.033	0.01	0.065	0.002	0.003	0.0011	0.0002	0.0050	0.0080	0.0010	0.0020	0.0019
1815480		Heat analysis		0.14	1.23	0.20	0.002	0.009	0.08	0.07	0.16	0.004	0.032	0.01	0.080	0.002	0.003	0.0010	0.0002	0.0052	0.0100	0.0020	0.0020	0.0021
1815479	18-2129	Product analysis		0.14	1.22	0.21	0.002	0.008	0.09	0.05	0.11	0.004	0.028	0.01	0.066	0.001	0.002	0.0008	0.0002	0.0056	0.0100	0.0010	0.0000	0.0000
1815479	18-2129	Product analysis		0.14	1.22	0.21	0.002	0.008	0.09	0.05	0.11	0.004	0.027	0.01	0.066	0.001	0.002	0.0007	0.0002	0.0058	0.0100	0.0010	0.0000	0.0000
1815480	18-2129	Product analysis		0.14	1.22	0.22	0.002	0.010	0.08	0.06	0.16	0.004	0.030	0.01	0.079	0.001	0.002	0.0004	0.0001	0.0066	0.0120	0.0010	0.0000	0.0000
1815480	18-2129	Product analysis		0.15	1.22	0.21	0.002	0.010	0.08	0.06	0.16	0.004	0.030	0.01	0.079	0.001	0.002	0.0002	0.0001	0.0068	0.0120	0.0010	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
1815479		Heat analysis		6.60	0.067	0.070	0.290	0.38
1815480		Heat analysis		6.15	0.082	0.085	0.320	0.39
1815479	18-2129	Product analysis		5.00	0.067	0.069	0.260	0.39
1815479	18-2129	Product analysis		4.66	0.067	0.069	0.260	0.39
1815480	18-2129	Product analysis		4.55	0.080	0.082	0.310	0.39
1815480	18-2129	Product analysis		4.41	0.080	0.082	0.310	0.40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Eng. Damoc Ciprian

Inspector/Buyer representative

Witnessed/Reviewed Florin Hriscu

10.01.2019

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 2/5 **D 4971/1** **27.12.2018** ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 13.196 tons - lbs	Total Length: 57.45 meters - feets	Pieces: 5 Bundles: -

Standard: API 5L ed.46-2018-PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015

Buyer's reference: PO.NO.: 3200060371	Dimensions: 508.00 x 19.05 mm -	Schedule: -	Length: 10.00 - 12.00 m -
Contract 50003718			-

Item	Item Client
14	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1815479	Longitudinal Flat	50.8	-	40.00	-	18.20	-	728.0	-	18-4793	471.00	-	576.00	-	40.90	0.82
1815479	Longitudinal Flat	-	-	20.00	-	19.00	-	380.0	-	18-3598	423.70	-	528.90	-	34.40	0.80
1815480	Longitudinal Flat	50.8	-	40.00	-	18.20	-	728.0	-	18-4793	479.00	-	576.00	-	39.10	0.83
1815480	Longitudinal Flat	-	-	20.00	-	19.10	-	382.0	-	18-3598	439.80	-	531.40	-	35.00	0.83

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1815479	18-7570	Transversal	10x10x55	-50	20.0	69	79	50	27.0	66	-	-	-	85	85	85	0.50	0.59	0.42
1815479	18-7571	Longitudinal	10x10x55	-50	-	133	121	130	50.0	128	-	-	-	90	90	90	1.16	1.03	1.13
1815480	18-7570	Transversal	10x10x55	-50	20.0	75	90	67	27.0	77	-	-	-	85	90	85	0.58	0.73	0.48
1815480	18-7571	Longitudinal	10x10x55	-50	-	76	56	61	50.0	64	-	-	-	85	85	85	0.57	0.42	0.46

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1815479	18-4012	-	-	-	-	-	-	-	<22
1815480	18-4012	-	-	-	-	-	-	-	

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

10.01.2019

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 3/5 **D 4971/1** **27.12.2018**	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 13.196 tons - lbs	Total Length: 57.45 meters - feets	Pieces 5	Bundles -
Buyer's reference PO.NO.: 3200060371	**Standard:** API 5L ed.46-2018-PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract 50003718	Dimensions: 508.00 x 19.05 mm -	Schedule: -	Length: 10.00 - 12.00 m -	-	-

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
14	-		205	-	20.5	5	-

Heat

Heat	Pieces	Length (m)	Weight (kg)
1815479	3	-	-
1815480	2	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

10.01.2019

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 4/5 **D 4971/1** **27.12.2018**	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 13.196 tons - lbs	Total Length: 57.45 meters - feets	Pieces 5	Bundles -
Buyer's reference PO.NO.: 3200060371 **Contract 50003718**	**Standard:** API 5L ed.46-2018-PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
	Dimensions: 508.00 x 19.05 mm -	Schedule: -	Length: 10.00 - 12.00 m -	-	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
14	-		205	-	20.5	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 508.00 - 19.05 -

API 5L–ISO 3183/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -18-0038/CPR/BUC 10 00067/A

Manufacturing process – hot rolling

The steel is electric arc furnace process.All steels is be fully killed and made to fine grain practice, source G300794.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 870-900°C, time soaking 50 min.

NDT full body:

- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface - cf. ISO 10893/12-satisfactory.
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage 100% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:

- Pipe ends that were not automatically checked were cut.

Magnetism residual max 30 Gauss.

Hydrostatic test hold for 5 sec. no leakage noticed.

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN,
NEAMT ROMANIA

18
0038/CPR/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355 NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Eng. Damoc Ciprian

Inspector/Buyer representative

Witnessed/Reviewed
Florin Hriscu

10.01.2019

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -					Page 5/5 **D 4971/1** **27.12.2018**		ArcelorMittal
Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS		STANDARD SEAMLESS PIPES					Total weight: 13.196 tons - lbs	Total Length: 57.45 meters - feets	Pieces 5	Bundles -
		Standard: API 5L ed.46-2018-PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015							
Buyer's reference PO.NO.: 3200060371		Dimensions: 508.00 x 19.05 mm -		Schedule: -			Length: 10.00 - 12.00 m -		- -
Contract 50003718									
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P -		
14	-		205	-	20.5	5			

been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Eng. Damoc Ciprian

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

10.01.2019

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

DETAILED PACKING LIST
P. O. NO. 50003718 ITEM - 14

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

10.01.2019

Buyer:

ARCELORMITTAL PROJECTS EUROPE B.V.
MANNESMANNWEG 5,
4794SL HEIJNINGEN
NETHERLANDS

Descriptn of Goods &/ or Services:

STANDARD SEAMLESS PIPES

Customer PO No.: 3200060371

OD(mm)	WT(mm)	STEEL GR.
508.00	19.05	X52NO/L360NO/S355G15+N/S355NLH

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	3-18-47-1825	1815479	11.09	2547
2	3-18-47-1826	1815479	11.52	2646
3	3-18-47-1827	1815480	11.54	2651
4	3-18-47-1824	1815479	11.62	2669
5	3-18-47-1828	1815480	11.68	2683

TOTAL NUMBER OF PIECES:	5
TOTAL METERS:	57.45
TOTAL KILOS:	13 196

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 27.12.2018

ArcelorMittal Tubular Products Roman S.A. Romania

248/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/4
B 10611/2 Rev. 1
10.07.2017

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS
NETHERLANDS B.V.
MANNESMANNWEG 5, 4794SL
HEIJNINGEN NETHERLANDS

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.657 tons - lbs	11.54 meters - feets	1	-

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;

Buyer's reference: PO NO.: 3200048174

Contract 50002793

Dimensions: 323.90 x 19.10 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
9	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Bill: -

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
-

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
1161693		Heat analysis		0.14	1.25	0.21	0.003	0.013	0.06	0.09	0.14	0.006	0.032	0.01	0.069	0.002	0.002	0.0020	0.0003	0.0050	0.0090	0.0010	0.0010	0.0050
1161693	16-1459	Product analysis		0.14	1.25	0.21	0.005	0.013	0.06	0.09	0.14	0.007	0.034	0.01	0.068	0.002	0.000	0.0015	0.0000	0.0050	0.0000	0.0020	0.0000	0.0000
1161693	16-1459	Product analysis		0.14	1.24	0.20	0.005	0.012	0.06	0.09	0.15	0.006	0.033	0.01	0.068	0.002	0.000	0.0017	0.0000	0.0050	0.0000	0.0020	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
1161693		Heat analysis		6.40	0.071	0.073	0.292	0.39
1161693	16-1459	Product analysis		6.80	0.070	0.070	0.300	0.39
1161693	16-1459	Product analysis		6.60	0.070	0.070	0.310	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

AES GALATI 25.08.2017
Statement based on report no. 67320817

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damian Cristian

ArcelorMittal Tubular Products Roman S.A. * ArcelorMittal 22788/91 * Romania *

Inspector/Buyer representative

Formular 12A2, rev. 3

Manufacturer:	MILL TEST CERTIFICATE	Page 2/4	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN. NEAMT ROMANIA	according to EN 10204/3.2/2004 -	B 10611/2 Rev. 1 10.07.2017	

Buyer:	ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 1.657 tons - lbs	Total Length: 11.54 meters - feets	Pieces 1	Bundles -

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;

Buyer's reference	PO NO.: 3200048174	Dimensions: 323.90 x 19.10 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -
Contract	**50002793**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
9	-		205	-	20.5	5	-

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
1161693	Longitudinal Flat	50.8	-	40.00	-	19.40	-	776.0	-	16-2726	457.00	-	567.00	-	39.40	0.81
1161693	Longitudinal Flat	-	-	20.00	-	19.70	-	394.0	-	16-2501	454.30	-	563.50	-	38.60	0.81

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1161693	16-5338	Transversal	10x10x55	-50	20.0	394	404	413	27.0	404	-	-	-	100	100	100	2.26	2.29	2.33
1161693	16-5339	Longitudinal	10x10x55	-50	-	413	421	407	50.0	414	-	-	-	100	100	100	2.33	2.37	2.30

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.- OD	Midwall	ID	End A	End B	HRC max.22
1161693	16-1967	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
1161693	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Dorian, 27/8891

ABS GALATI 25.08.2017 Stamped based on report no. 6732098/17

Inspector/Buyer representative

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 10611/2 Rev. 1 10.07.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 1.657 tons - lbs	Total Length: 11.54 meters - feets	Pieces 1	Bundles -

Buyer's reference PO NO.: 3200048174	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;		
Contract 50002793	Dimensions: 323.90 x 19.10 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH -
9	-		205	-	20.5	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 19.10 -

API 5L/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -17-0038/CPD/BUC 10 00067/A

Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace. All steels shall be fully killed and made to fine grain practice, source G300706 .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 870-880°C, time soaking 42 min.
NDT full body:
- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf. ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -acc. ISO 10893/12-satisfactory
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage ≥ 20% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-acc. ISO 10893/10-satisfactory.
-ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
-wet magnetical particles testing on the pipe ends – satisfactory.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damian Cipriam

ArcelorMittal Tubular products Roman S.A. ArcelorMittal 198/98 Romania

Formular 12A2, rev. 3

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

17
0038/CPD/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

ABS GALATI

Inspector/Buyer representative

Stamped based on report no. 57 3209817

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN. NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 10611/2 Rev. 1 10.07.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 1.657 tons - lbs	Total Length: 11.54 meters - feets	Pieces 1	Bundles -

Buyer's reference PO NO.: 3200048174	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMR 22.06.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15/09.05.2016; NACE MR 0103/2012; NACE MR 0175/ISO 15156/2015;

Contract 50002793	Dimensions: 323.90 x 19.10 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
9	-		205	-	20.5	5	-

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.
Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

ABS CALATI 25.04.2017

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Dan [illegible]

ArcelorMittal Tubular Products Roman S.A. Romania

Inspector/Buyer representative

Formular 12A2, rev. 3

This certificate replaces certificate number DTM 1720491/1
issued on 03.08.2017 which is hereby cancelled

Certificate no: DTM1720491/1A1

Inspection Certificate

Project: --

Client:

Office: Hamburg

Client's Order Number: 435043-1

Date: 28 August 2017

Order Status: complete

Inspection Dates
First: 10 July 2017

Final: 28 July 2017

This certificate is issued to **the above client to certify that a surveyor to Lloyd's Register did, at their request, attend the undermentioned manufacturer for the purpose of inspecting and witnessing tests on the product listed below.**

References
Manufacturer: Vallourec Deutschland GmbH, Düsseldorf-Rath / Germany
Manufacturer's order no.: 860/0052

Description: Hot finished seamless steel pipe

Material: X52N (Grade L360N, PSL2)
Specification: API Spec. 5 L, PSL 2, 12.2012 / ISO 3183:2012, PSL 2, VAD-MEC-LY01, REV 8, 2014-02-26, *

*For further details please refer to manufacturer's works test certificate 20945RP17.

Method of manufacture: hot rolled
Stage of manufacturing: as rolled
Heat treatment: normalized

Item no.	Quantity (pcs.)	Dimensions (mm)	Total Length (m)	Total Weight (kg)	Heat nos.	Test nos.
07	-6-	559 x 25.4	65,67	21.855	194069 194074	3B, 4 1A, 2

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The following examinations were carried out with satisfactory results in accordance with the above listed order number and specification:

- **Selected and marked test specimen.**
- **Witnessed mechanical material tests.**
- **Hydraulic Test monitored continuously.**
- **Ultrasonic Test monitored continuously.**
- **Visual Examination.**
- **Verified dimensional examinations.**
- **Reviewed chemical analysis and works test certificates stamped and signed accordingly.**

Identification (hard stamped):
LR DTM MM, Heat no., Works brand, Material,
Month/Year, Specification

EN/MM

Lloyd's Register

M. Mielke
Malk Mielke Surveyor to Lloyd's Register EMEA

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LR1101.2016.05

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Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 20945RP17 (A03) Page: 1 / 7 Date: 26.07.2017

(A01) **Vallourec Deutschland GmbH**	(A08.1) **Vallourec-Order-No.** 238859 (A08.2) **Suborder** 86000520
(A06.1) Customer	(A07.1) Customer Order-No. 435043-1
(A06.2) **Orderer**	(A07.2) **Orderer Order-No.** 435043-1 **Date** 07.04.2017

(B01, B02, B04) **Description of the product**	Hot finished seamless steel pipes API 5L / ISO 3183 , PSL 2, 2012 EN 10225, 2009 Norsok MDS-Y22* rev 5, June 2007 and Norsok MDS-Y27* rev 4, June 2007##(*without qualification paragraph and without surface protection paragraph) NACE MR0175 / ISO 15156-2 : 2009, annex A.2.1.2 Norsok MDS-C22, Rev. 5, October 2013 With API monogram VAD-MEC-LY01, Rev. 8, February 26-2014 L360N / X52N, API 5L / ISO 3183, PSL 2 S355G14+N, EN 10225 S355G15+N, EN 10225 Ends bevelled,angle 30° (+5 °/ -0), root face 1.6 mm (± 0.8 mm) Outside with dry varnish Without inside rust protection Tube ends closed by plastic plugs, or plastic caps, in mill's choice

(A10)
Inspection by LLOYD´S REGISTER EMEA DTM 1720491

(A13) Vallourec Item	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
7			OD 559 x WT 25.4 mm OD Tol ± 0.75 % WT Tol. : -10 % + 4.2 mm, localised + 5.47 mm allowed	Random length from 10000 to 12000 mm

(A13) Vallourec Item	(A09) **Cust. Item**	(B08) Quantity	(B11) Total length m	(B13) Weight kg
7		6	65,67	21.855

L00540328 S00000024
D003-GR1 P0003-0010

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 20945RP17 (A03) Page: 2 / 7 Date: 26.07.2017

Vallourec Item	Delivery Note-No	Packing list-No
7	38303	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.150	-	-	-	-	-	-	-	-
max	-	0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
194069	Electro (EAF)	0.130	0.330	1.42	0.010	0.0010	0.042	0.090	0.090	0.090	0.010
194074	Electro (EAF)	0.140	0.360	1.40	0.010	0.0010	0.046	0.070	0.090	0.060	0.020

(B07.1) Heat	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.100	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100	.43	.25
194069	0.043	0.0050	0.0070	0.004	0.030	0.0090	0.002	0.0005	0.0004	0.0000	.41	.23
194074	0.044	0.0040	0.0060	0.004	0.030	0.0090	0.001	0.0005	0.0003	0.0000	.41	.24

(B07.1) Heat	EF 02 %	EF 10 %
min	-	-
max	0.10	0.80
194069	0.08	0.28
194074	0.08	0.24

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

Heats fully killed

AL >= 2,2 X N

Country of origin: Germany

S00000024 P0004-0010
L00540328 D003-GR1

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004
		No. : 20945RP17 (A03) Page: 3 / 7 Date: 26.07.2017

(C71)

HEAT CHEMICAL ANALYSIS

PMI Test (Positive Material Identification), each Pipe/Tube: Satisfactory
EF3 = V + NB MAX. 0,100%
HEAT NO. 194069
LADLE ANALYSIS = 0,073%
CHECK ANALYSIS = 0,075%
CHECK ANALYSIS = 0,072%
HEAT NO. 194074
LADLE ANALYSIS = 0,074%
CHECK ANALYSIS = 0,078%
CHECK ANALYSIS = 0,079%
.
RESIDUAL ELEMENTS IN LADLE AND PRODUCT ANALYSIS:
ANTIMONY SB MAX. 0,01%
.
HEATS FULLY KILLED, FINE GRAINED AND DESULPHURISED

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.150	-	-	-	-	-	-	-	-
max		0.160	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
194069	3B	0.127	0.334	1.39	0.009	0.0013	0.037	0.097	0.089	0.093	0.010
194069	4	0.129	0.332	1.39	0.009	0.0012	0.037	0.095	0.088	0.093	0.010
194074	1A	0.155	0.363	1.36	0.009	0.0020	0.041	0.073	0.087	0.069	0.021
194074	2	0.154	0.368	1.37	0.009	0.0019	0.041	0.075	0.088	0.069	0.022

(B07.1) Heat	(C00.1) Test Piece	V %	As %	Sn %	Ti %	Nb(Cb) %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.100	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100
194069	3B	0.043	0.0045	0.0050	0.003	0.032	0.0103	0.001	0.0005	0.0001	0.0012
194069	4	0.042	0.0043	0.0050	0.003	0.030	0.0096	0.001	0.0005	0.0001	0.0012
194074	1A	0.044	0.0035	0.0050	0.003	0.034	0.0122	0.001	0.0005	0.0001	0.0010
194074	2	0.045	0.0035	0.0050	0.004	0.034	0.0127	0.001	0.0005	0.0001	0.0010

L00540328 S00000024
D0003-GR1 P0005-0010

Vallourec Deutschland GmbH (A01)
Werk Rath-Pilger
Rather Kreuzweg 106
40472 DÜSSELDORF
GERMANY

vallourec

INSPECTION CERTIFICATE (A02)
3.2 EN 10204:2004

No. : 20945RP17 (A03)

Date: 26.07.2017

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	CQ 03 %	CQ 08 %	EF 02 %	EF 10 %						
min		-	-	-	-						
max		.43	.25	0.10	0.80						
194069	3B	.40	.23	0.08	0.29						
194069	4	.40	.23	0.08	0.29						
194074	1A	.42	.25	0.08	0.25						
194074	2	.42	.25	0.08	0.25						

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	TTT

(B07.1) Heat	(C00.1) Test Piece	(C10) Diameter	(C12) TS	(C15) Red.Area							
		mm	R_m MPa	Z %							
min		-	368	-							
max		-	-	-							
194069	3B 1)	09.96	525	76							
194069	3B 1)	09.96	523	77							
194069	3B 1)	09.95	525	76							
194074	1A 1)	09.96	547	74							
194074	1A 1)	09.95	548	73							
194074	1A 1)	09.95	549	72							

L00540328 S00000024
D003-GR1 P0006-0010

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal
Location (C01.1)	MIDDLE CONCERNING WALL

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 20945RP17 (A03) Page: 5 / 7 Date: 26.07.2017

TENSILE TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C10) Diameter	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -					
min		-	360	460	21.0	-					
max		-	530	760	-	0.93					
194069	3B	12.49	364	510	35.5	0.71					
194074	1A	12.45	373	528	34.5	0.71					

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal
Location (C01.1)	MIDDLE CONCERNING WALL

(B07.1) Heat	(C00.1) Test Piece	(C10) Diameter	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	$R_{t0,5}$ MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -					
min		-	345	460	22.0	-					
max		-	-	620	-	0.88					
194069	3B	13.97	371	511	30.5	0.73					
194074	1A	13.95	377	524	29.0	0.72					

1)TS MIN. 368 N/QMM; REDUCTION OF AREA Z AVERAGE MIN. 35%

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

L00540328 S00000024
D003-GR1 P0007-0010

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004
		No. : 20945RP17 (A03) Page: 6 / 7 Date: 26.07.2017

IMPACT TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean	(C42.2) Shear fr1	(C42.2) Shear fr2	(C42.2) Shear fr3		
		qcm	J	J	J	J	%	%	%		
min		-	38.0	38.0	38.0	50.0	-	-	-		
max		-	-	-	-	-	-	-	-		
194069	3B	0.800	171	167	143	160	60	60	50		
194074	1A	0.800	93.0	95.0	104	97.3	20	20	20		

HARDNESS TEST RESULTS

Location (C01.1)	MIDDLE CONCERNING WALL

(B07.1) Heat	(C00.1) Test Piece	(C31) Value	(C31) Value								
		HB	HB								
min		-	-								
max		237.0	237.0								
194069	3B	146.0	149.0								
194074	1A	156.0	158.0								

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT	NORMALIZED	5 MIN 910 DEGREES C AIR	
HYDROSTATIC TEST	205 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY

NON DESTRUCTIVE TESTING BY ULTRASONIC INSPECTION
DETECTION FOR LONGITUDINAL IMPERFECTIONS
IN ACC. TO EN 10246-7: 2005 AND EN ISO I0893-10: 2011
ACCEPTANCE CATEGORY U2, SUB-CATEGORY C,
RECTANGULAR NOTCH; LENGTH MIN. 50 MM, WIDTH MAX. 1,0 MM
DEPTH 5% OF WALL THICKNESS, MIN. 0,3 MM & MAX. 1,5 MM
INSIDE & OUTSIDE, FULL LENGTH, EACH PIPE/TUBE SATISFACTORY
.
NON DESTRUCTIVE TESTING BY ULTRASONIC INSPECTION
DETECTION FOR LAMINAR IMPERFECTIONS
IN ACC. TO EN 10246-14, ACCEPTANCE CATEGORY U3,
FULL LENGTH, EACH PIPE/TUBE SATISFACTORY
.
RESIDUAL MAGNETISM WHEN LEAVING THE MILL MAX. 30 GAUSS

S00000024
P0008-0010
L00540328
D003-GR1

Vallourec Deutschland GmbH (A01) Werk Rath-Pilger Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004
		No. : 20945RP17 (A03) Page: 7 / 7 Date: 26.07.2017

(A04, B06)

MARKING, IDENTIFICATION

VALLOUREC	DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS VALLOUREC LOGO VALLOUREC API SPEC 5L 5L0302 API-MONOGRAM MONTH/YEAR TERMS OF DELIVERY ISO3183 X52N/L360N INSPECTORS BRAND LR DTM MM HEAT-NO. TERMS OF DELIVERY EN10225 S355G14+N/S355G15+N WA PAINT STENCILED ON ONE SIDE VALLOUREC LOGO VALLOUREC API SPEC 5L 5L0302 API-MONOGRAM MONTH/YEAR TERMS OF DELIVERY ISO3183 559 25.4 X52N/L360N PROCESS OF MANUFACTURE SMLS HEAT-NO. TERMS OF DELIVERY EN10225 S355G14+N/S355G15+N PIPE NO. (TALLY-NR.) MILL REFERENCE ORDER NO. 86000520 TUBE/PIPE LENGTH M WA UNIQUE PIPE-NO. CUSTOMER ORDER-NO. 435043-1 238859 VLR ITEM-NO 7 COUNTRY OF ORIGIN GERMANY

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	26.07.2017	
Validated by	Inspection Representative	Third Party Representative
	FUHRMANN	
☎	+49(0)2119603545	
🖷	+49(0)2119602213	
@	CERTIFICATES-RA-PILGER@VALLOUREC.COM	
Stamp		

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

Lloyd's Register EMEA
Sören Schumacher
Hamburg Office
Lloyd's Register
28 JUL 2017

L00540328 S00000024
D003-GR1 P0009-0010

Vallourec Deutschland GmbH Werk Rath-Pilger Rather Kreuzweg 106 40472 Düsseldorf	vallourec	TUBE/ PIPE LIST No. : 20945RP17 Page : 1 / 1 Date : 26.07.2017

Customer	Vallourec-Order-No. 238859
Customer Order-No. 435043-1 Item	Item 7 Suborder 86000520

Tally-No	Tube/Pipe-No.	Heat	Test Piece	Single length M	Single length FT	Weight KG	Weight LBS
1	2	194074		11,410	37,434	3735	8234
2	6	194069		10,840	35,564	3655	8058
3	3	194069		11,060	36,286	3655	8058
4	4	194069		10,480	34,383	3510	7738
5	5	194069		11,120	36,483	3705	8168
6	1	194074		10,760	35,302	3595	7926
Summary				65,670	215,452	21855	48182

L00540328 S00000024
D003-GR1 P0010-0010

Manufacturer:	MILL TEST CERTIFICATE	Page 1/3	ArcelorMittal
ArcelorMittal Tubular Products Roman S A STEFAN CEL MARE STR. BL 15, SC A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.2/2004 -	D 2309/2 28.09.2015	

Buyer:	ARCELORMITTAL PROJECTS NETHERLANDS B V MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight 10 174 tons - lbs	Total Length. 54 41 meters - feets	Pieces 5	Bundles -

Standard: API 5L Ed 45/2012 -PSL 2, NORSOK M120 Ed 5,November 2008-Y 22 Rev 5,June 2007, EN 10225-2009, TPS for EU -Stock Rev 05/12 05 2014

Buyer's reference	PO NO 3200040928 REV. 00	Dimensions. 323.90 x 25 40 mm -	Schedule: -	Length 8 89 - 11 00 m -	- -
Contract	**50002180**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N / S355G15+N / X52N
5	-		205	-	20.5	5	-
				Bill			Transport

Chemical Analysis(%)

Heat	Bulletin No	Product Req		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0 16	1 40	0 55	0 008	0 025	0 20	0 20	0 20	-	0.055	0 08	0 080	0 040	0 010	-	0 0005	0 0140	-	-	-	-
			Min	-	-	0 25	-	-	-	0 01	-	-	0 020	-	-	-	-	-	-	-	-	-	-	
53872		Heat analysis		0 13	1 20	0 29	0 004	0 012	0 10	0 10	0 19	0 008	0.028	0 04	0 060	0 001	0 002	0 0035	0.0003	0 0089	0 0120	0 0000	0 0081	0 0003
803653		Heat analysis		0 14	1 27	0 30	0 003	0 011	0 08	0.10	0 14	0 007	0 030	0 02	0 061	0 002	0 003	0 0024	0.0001	0 0000	0 0080	0 0040	0 0010	0 0001
53872	15-1446	Product analysis		0 14	1 24	0.26	0 005	0 010	0 10	0.10	0 19	0 005	0.034	0 01	0 060	0 002	0 000	0 0017	0.0000	0 0087	0 0000	0 0010	0 0000	0 0000
53872	15-1446	Product analysis		0 14	1 24	0 25	0 005	0 009	0 10	0 11	0.18	0 005	0 033	0 01	0 060	0 002	0 000	0.0015	0 0000	0 0087	0 0000	0 0010	0 0000	0 0000
803653	15-1548	Product analysis		0 14	1 25	0 28	0 004	0 014	0 08	0 10	0 14	0 000	0.031	0 02	0 060	0 002	0.000	0.0016	0 0000	0 0098	0.0000	0 0010	0 0000	0 0000
803653	15-1548	Product analysis		0 14	1 26	0 27	0 005	0 014	0 08	0 10	0.14	0 000	0.030	0 02	0 060	0.002	0 000	0 0018	0.0000	0 0098	0 0000	0 0010	0 0000	0 0000

Chemical Analysis(%)

Heat	Bulletin No	Product Req		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0 100	0.120	0 800	0 43
			Min	-	-	-	-	-
53872		Heat analysis		3 15	0 061	0 063	0.430	0 39
803653		Heat analysis		0 00	0 063	0 066	0.340	0 40
53872	15-1446	Product analysis		3 91	0 062	0.062	0 400	0 40
53872	15-1446	Product analysis		3 79	0.062	0.062	0.400	0 40
803653	15-1548	Product analysis		3 16	0 062	0 062	0 340	0 40
803653	15-1548	Product analysis		3 06	0 062	0 062	0 340	0 40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

CE_IIW = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements

Quality Control Representative
Eng Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. J27/88/91 România

Inspector/Buyer representative

VGALEA 06.10.2015

GALATI

Formular 12A2, rev 3

Manufacturer:	MILL TEST CERTIFICATE	Page 2/3	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.2/2004 -	D 2309/2 28.09.2015	

Buyer:	ARCELORMITTAL PROJECTS NETHERLANDS B V MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight 10 174 tons - lbs	Total Length. 54.41 meters - feets	Pieces 5	Bundles -
Buyer's reference	PO NO. 3200040928 REV 00	**Standard:** API 5L Ed 45/2012 -PSL 2, NORSOK M120 Ed 5,November 2008-Y 22 Rev 5,June 2007, EN 10225-2009, TPS for EU -Stock Rev 05/12 05 2014				
Contract	**50002180**	Dimensions 323 90 x 25.40 mm -	Schedule: -	Length 8 89 - 11.00 m -	-	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
5	-		205	-	20.5	5	L360N / S355G15+N / X52N -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max. 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
53872	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	15-3501	400.00	-	538 00	-	29 80	0 74
53872	Longitudinal Round	-	-	10 00	-	0.00	-	78.5	-	15-2745	394.90	-	522 30	-	33.50	0.76
803653	Longitudinal Round	50 8	-	12 50	-	0.00	-	122.7	-	15-3500	369.00	-	553.00	-	31.60	0.67
803653	Longitudinal Round	-	-	10.00	-	0 00	-	78.5	-	15-2744	369 40	-	535.00	-	33.30	0.69

Impact Test

Heat	Impact Test Bulletin No	Orientation	Size (mm)	Temp (°C)	Req KV (min J)	KV values (J)			Req Avr (min J)	Avr fracture energy (J)	KCU min -J/cm² T °C			Shear Area min %			Lateral Expansion min mm		
53872	15-5836	Transversal	10x10x55	-50	-	373	367	370	27 0	370	-	-	-	100	100	100	2 29	2 24	2 28
53872	15-5837	Longitudinal	10x10x55	-50	-	412	405	417	50 0	411	-	-	-	100	100	100	2 34	2 30	2 36
803653	15-5854	Transversal	10x10x55	-50	-	116	124	83	27 0	108	-	-	-	90	90	90	1 01	1 08	0 70
803653	15-5855	Longitudinal	10x10x55	-50	-	112	105	53	50 0	90	-	-	-	90	90	85	0 97	0 91	0 57

Heat

Heat	Pieces	Length (m)	Weight (kg)
53872	4	-	-
803653	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. 27/88/9 Romania

V GHEA 06, 10, 2015

TUV SUD GALATZI

Inspector/Buyer representative

Manufacturer: ArcelorMittal Tubular Products Roman S A. STEFAN CEL MARE STR, BL 15, SC A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/3 D 2309/2 28.09.2015	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B V MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight 10 174 tons - lbs	Total Length: 54 41 meters - feets	Pieces 5	Bundles -

Standard: API 5L Ed 45/2017 -PSL 2, NORSOK M120 Ed 5,November 2008-Y 22 Rev 5,June 2007, EN 10225-2009, TPS for EU -Stock Rev 05/12 05 2014

Buyer's reference PO NO 3200040928 REV 00	Dimensions: 323 90 x 25 40 mm -	Schedule: -	Length 8 89 - 11 00 m -	- -
Contract 50002180				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade L360N / S355G15+N / X52N -
5	-		205	-	20.5	5	

Remarks " The pipes are manufactured by Plug process "
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace. All steels shall be fully killed and made to fine grain practice, ABS Sisak d.o.o B.Kavurica 12,44010 Sisak Republica Hravatska and Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 900-910°C, time soaking 55 min.
NDT full body:
- 100% ultrasonic method,longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf. ISO 10893/10– satisfactory.
- detection of laminar imperfection on the pipe body with 100% surface coverage (U3) - cf. ISO 10893/8– satisfactory.
Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.
Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

Heat no . 53872 Through Thickness Test Buletin No. 15-36 - Z ≥ 25% values : 72.96 ; 73.28 ; 72.34
- Z ≥ 35% values : 72.86
- U TS (N/mm²) values: 527.3 ; 535.9 ; 525.4
Heat no . 803658 Through Thickness Test Buletin No. 15-39 - Z ≥ 25% values : 73.34 ; 71.16 ; 70.49
- Z ≥ 35% values : 71.33
- U TS (N/mm²) values: 539.7 ; 535.9 ; 529.7

YGAEA 06.10.2015 GALATI

We state on our sole responsibility that the delivered products are in conformity with the order requirements

Quality Control Representative
Eng Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 Romania

Inspector/Buyer representative

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR. BL 15. SC. A. PARTER I
ROMAN. NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/4

B 11174/1 Rev. 1

19.08.2017

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS
NETHERLANDS B.V.
MANNESMANNWEG 5, 4794SL
HEIJNINGEN NETHERLANDS

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.936 tons - lbs	107.12 meters - feets	9	-

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMRNo. 15/15.09.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016; ANSI/NACEMR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015

Buyer's reference: PO. NO.: 3200049600

Contract 50002887

Dimensions: 323.90 x 15.90 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
3	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
57950		Heat analysis		0.13	1.24	0.22	0.003	0.011	0.10	0.08	0.18	0.010	0.034	0.03	0.060	0.002	0.001	0.0013	0.0003	0.0071	0.0100	0.0000	0.0065	0.0008
57950	16-1819	Product analysis		0.14	1.23	0.18	0.003	0.011	0.10	0.07	0.17	0.001	0.036	0.01	0.060	0.000	0.000	0.0000	0.0000	0.0070	0.0000	0.0010	0.0000	0.0000
57950	16-1819	Product analysis		0.14	1.24	0.19	0.003	0.012	0.10	0.06	0.17	0.002	0.035	0.01	0.060	0.000	0.000	0.0000	0.0000	0.0070	0.0000	0.0010	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
57950		Heat analysis		4.79	0.062	0.063	0.390	0.39
57950	16-1819	Product analysis		5.14	0.060	0.060	0.350	0.40
57950	16-1819	Product analysis		5.00	0.060	0.060	0.340	0.40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

25.08.2017
Surveyed based on report no 67322.7169
ABS GALATI

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Ionoc Ionuț

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal Romania

Inspector/Buyer representative

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR. BL 15. SC. A. PARTER I ROMAN. NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/4 B 1174/1 Rev. 1 19.08.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5. 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 12.936 tons - lbs	Total Length: 107.12 meters - feets	Pieces 9	Bundles -

Buyer's reference PO. NO.: 3200049600	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMRNo. 15/15.09.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016; ANSI/NACEMR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015			
Contract 50002887	Dimensions: 323.90 x 15.90 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH -
3	-		205	-	20.5	5	

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
57950	Longitudinal Flat	50.8	-	40.00	-	16.30	-	652.0	-	16-4105	438.00	-	606.00	-	40.60	0.72
57950	Longitudinal Flat	-	-	20.00	-	16.20	-	324.0	-	16-3731	438.30	-	598.80	-	39.40	0.73

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
57950	16-7538	Longitudinal	10x10x55	-50	-	182	183	178	50.0	181	-	-	-	95	95	95	1.66	1.67	1.62
57950	16-7539	Transversal	10x10x55	-50	20.0	169	165	160	27.0	165	-	-	-	95	95	95	1.55	1.50	1.48

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
57950	16-3237	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
57950	9	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Dănuț Ionuțan

Formular 12A2 rev. 3

25.08.2017
Stamped based on report no. 67322159

Inspector/Buyer representative

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 11174/1 Rev. 1 19.08.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 12.936 tons - lbs	Total Length: 107.12 meters - feets	Pieces 9	Bundles -
Buyer's reference PO. NO.: 3200049600	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMRNo. 15/15.09.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016; ANSI/NACEMR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract 50002887	Dimensions: 323.90 x 15.90 mm -	Schedule: -		Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
3	-		205	-	20.5	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 15.90 -

API 5L/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -17-0038/CPD/BUC 10 00067/A

Manufacturing process – hot rolling

The steel is electric arc furnace process.All steels is be fully killed and made to fine grain practice, source G000108.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 910-920°C, time soaking 35 min.

NDT full body:

- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface - acc. ISO 10893/12-satisfactory.
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage ≥ 20% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:

- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-acc. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
- wet magnetical particles testing on the pipe ends – satisfactory.

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Eng. Damoc Mihai

Formular 12A2, rev.1

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

17
0038/CPD/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355 NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD 25-08-2017

Inspector/Buyer representative

Stamped based on GAL report no. 6732271/09

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR. BL 15. SC. A. PARTER 1 ROMAN. NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 11174/1 Rev. 1 19.08.2017	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS NETHERLANDS B.V. MANNESMANNWEG 5, 4794SL HEIJNINGEN NETHERLANDS	SEAMLESS STEEL LINE PIPES	Total weight: 12.936 tons - lbs	Total Length: 107.12 meters - feets	Pieces 9	Bundles -
Buyer's reference PO. NO.: 3200049600	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.08-09.05.2016 & Tehnical Offer AMRNo. 15/15.09.2016+API 5L Annex J; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016; ANSI/NACEMR 0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract 50002887	Dimensions: 323.90 x 15.90 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH
3	-		205	-	20.5	5	-

Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

ArcelorMittal Tubular Products Roman S.A. * Romania * 27/88/91

25.09.2017
ABS GALATI
Stamped based on report no. 6+322+169

Inspector/Buyer representative

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

Page 1/4
D 4445/1
28.08.2018

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V.
MANNESMANNWEG 5,4794SL
HEIJNINGEN NETHERLANDS

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
11.688 tons - lbs	73.09 meters - feets	7	-

Standard: API 5L ed.45/2012 PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.Technical Pipe Specification for EU-Stock Rev.09-15.08.2017 & Technical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015

Buyer's reference: PO.NO.: 3200060371
Contract 50003718

Dimensions: 323.90 x 21.44 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
62997		Heat analysis		0.14	1.25	0.21	0.005	0.008	0.06	0.08	0.18	0.007	0.024	0.01	0.060	0.002	0.001	0.0016	0.0003	0.0097	0.0090	0.0000	0.0038	0.0006
62997	18-1106	Product analysis		0.15	1.26	0.20	0.005	0.010	0.10	0.11	0.19	0.007	0.030	0.02	0.060	0.002	0.001	0.0015	0.0002	0.0085	0.0120	0.0010	0.0000	0.0000
62997	18-1106	Product analysis		0.15	1.27	0.21	0.005	0.011	0.10	0.11	0.19	0.008	0.030	0.02	0.060	0.002	0.001	0.0017	0.0002	0.0088	0.0120	0.0010	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
62997		Heat analysis		2.47	0.062	0.063	0.330	0.39
62997	18-1106	Product analysis		3.53	0.062	0.063	0.420	0.42
62997	18-1106	Product analysis		3.41	0.062	0.063	0.420	0.42

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

31.08.2018

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 2/4 **D 4445/1** **28.08.2018**	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 11.688 tons - lbs	Total Length: 73.09 meters - feets	Pieces 7	Bundles -
Buyer's reference PO.NO.: 3200060371 **Contract 50003718**	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.Technical Pipe Specification for EU-Stock Rev.09-15.08.2017 & Technical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
	Dimensions: 323.90 x 21.44 mm -	Schedule: -	Length: 10.00 - 12.00 m -	-	-

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
15	-		205	-	20.5	5	-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
62997	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	18-2987	445.00	-	619.00	-	33.80	0.72
62997	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	18-2403	420.40	-	598.70	-	34.90	0.70

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
62997	18-4965	Transversal	10x10x55	-50	20.0	141	135	98	27.0	125	-	-	-	95	95	90	1.24	1.19	0.84
62997	18-4966	Longitudinal	10x10x55	-50	-	154	142	145	50.0	147	-	-	-	95	95	95	1.37	1.26	1.28

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
62997	18-2543	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
62997	7	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

31.08.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 3/4 **D 4445/1** **28.08.2018**	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 11.688 tons - lbs	Total Length: 73.09 meters - feets	Pieces 7	Bundles -
Buyer's reference PO.NO.: 3200060371 **Contract 50003718**	**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.Technical Pipe Specification for EU-Stock Rev.09-15.08.2017 & Technical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
	Dimensions: 323.90 x 21.44 mm -	Schedule: -	Length: 10.00 - 12.00 m -	-	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
15	-		205	-	20.5	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 21.44 -

API 5L/ISO 3183/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -18-0038/CPR/BUC 10 00067/A

Manufacturing process – hot rolling

The steel is electric arc furnace process.All steels is be fully killed and made to fine grain practice, source G000108.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 870-920°C, time soaking 46 min.

NDT full body:

- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface - acc. ISO 10893/12-satisfactory.
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage 100% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:

- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-acc. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
- wet magnetical particles testing on the pipe ends – satisfactory.

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

18
0038/CPR/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355 NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Inspector/Buyer representative
Witnessed/ Reviewed
Florin Hriscu
31.08.2018

BUREAU VERITAS ROMANIA 26 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -					Page 4/4 **D 4445/1** **28.08.2018**		ArcelorMittal
Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS		STANDARD SEAMLESS PIPES					Total weight: 11.688 tons - lbs	Total Length: 73.09 meters - feets	Pieces 7 / Bundles -
Buyer's reference PO.NO.: 3200060371 **Contract 50003718**		**Standard:** API 5L ed.45/2012 PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.Technical Pipe Specification for EU-Stock Rev.09-15.08.2017 & Technical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015						
		Dimensions: 323.90 x 21.44 mm -		Schedule: -			Length: 10.00 - 12.00 m -	- / -	
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P -		
15	-		205	-	20.5	5			

Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements,
and any other requirements designated in the purchase order, and has been found to meet such requirements

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

31.08.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

DETAILED PACKING LIST
P. O. NO. 50003718 ITEM - 15

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

Buyer:

ARCELORMITTAL PROJECTS EUROPE B.V.
MANNESMANNWEG 5,
4794SL HEIJNINGEN
NETHERLANDS

Witnessed/Reviewed
Florin Hriscu
BUREAU VERITAS ROMANIA
20 PARIS 1828
ROMAN INDUSTRY & FACILITIES
31.08.2018

Descriptn of Goods &/ or Services:

STANDARD SEAMLESS PIPES

Customer PO No.: 3200060371

OD(mm)	WT(mm)	STEEL GR.
323.90	21.44	X52NO/L360NO/S355G15+N/S355NLH

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-18-27-1411	62997	10.06	1609
2	2-18-27-1409	62997	10.43	1668
3	2-18-27-1408	62997	10.47	1674
4	2-18-27-1407	62997	10.50	1679
5	2-18-27-1410	62997	10.50	1679
6	2-18-27-1405	62997	10.55	1687
7	2-18-27-1406	62997	10.58	1692

TOTAL NUMBER OF PIECES:	7
TOTAL METERS:	73.09
TOTAL KILOS:	11 688

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 28.08.2018

274/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/4

B 16062/1

23.11.2018

ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V.
MANNESMANNWEG 5,4794SL
HEIJNINGEN NETHERLANDS

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
10.196 tons - lbs	104.62 meters - feets	10	-

Standard: API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015

Buyer's reference: PO.NO.: 3200063376

Contract 50003854

Dimensions: 323.90 x 12.70 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Bill: -

Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
-

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
10756K		Heat analysis		0.15	1.23	0.20	0.005	0.012	0.06	0.04	0.07	0.004	0.037	0.01	0.069	0.001	0.001	0.0019	0.0003	0.0079	0.0050	0.0010	0.0010	0.0010
10756K	18-1838	Product analysis		0.15	1.21	0.22	0.004	0.012	0.06	0.03	0.07	0.002	0.030	0.02	0.069	0.002	0.001	0.0020	0.0002	0.0070	0.0060	0.0010	0.0000	0.0000
10756K	18-1838	Product analysis		0.15	1.21	0.21	0.004	0.011	0.06	0.03	0.07	0.002	0.031	0.02	0.069	0.002	0.001	0.0020	0.0002	0.0070	0.0060	0.0010	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
10756K		Heat analysis		4.68	0.070	0.071	0.173	0.39
10756K	18-1838	Product analysis		4.29	0.071	0.072	0.180	0.39
10756K	18-1838	Product analysis		4.43	0.071	0.072	0.180	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. Romania J27/88/91

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

29.11.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/4 B 16062/1 23.11.2018	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -
Buyer's reference PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract 50003854	Dimensions: 323.90 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
4	-		205	-	20.5	5	-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
10756K	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	18-4171	407.00	-	543.00	-	42.70	0.75
10756K	Longitudinal Flat	-	-	20.00	-	13.60	-	272.0	-	18-3289	404.40	-	511.00	-	33.00	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
10756K	18-6736	Transversal	10x10x55	-50	20.0	103	94	93	27.0	97	-	-	-	90	90	90	0.88	0.80	0.79
10756K	18-6737	Longitudinal	10x10x55	-50	-	146	132	143	50.0	140	-	-	-	95	95	95	1.29	1.16	1.27

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
10756K	18-3503	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
10756K	10	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

29.11.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 16062/1 23.11.2018	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -

Buyer's reference PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015
Contract 50003854	Dimensions: 323.90 x 12.70 mm - / Schedule: - / Length: 10.00 - 12.00 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
4	-		205	-	20.5	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 12.70 -

API 5L/–ISO 3183/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -18-0038/CPR/BUC 10 00067/A

Manufacturing process – hot rolling

The steel is electric arc furnace process.All steels is be fully killed and made to fine grain practice, source G300047.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 890-920°C, time soaking 13-14 min.

NDT full body:

- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage 100% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:

- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
- wet magnetical particles testing on the pipe ends – satisfactory.

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

18
0038/CPR/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355 NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Inspector/Buyer representative
Witnessed/Reviewed
Florin Hriscu
29.11.2018

ArcelorMittal Tubular Products Roman S.A. Romania 127/88/91

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 16062/1 23.11.2018	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -
Buyer's reference PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract 50003854	Dimensions: 323.90 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P -
4	-		205	-	20.5	5	

Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

ArcelorMittal Tubular Products Roman S.A. Romania 127/88/91

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

29.11.2018

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/4 B 16062/1 23.11.2018	ArcelorMittal

Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -

Buyer's reference PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015
Contract 50003854	Dimensions: 323.90 x 12.70 mm - / Schedule: - / Length: 10.00 - 12.00 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
4	-		205	-	20.5	5	-
				Bill: -			Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	As	Al	Mo	V	Nb	Ti	Ca	B	N	Sn	Pb	Sb	Bi
			Max	0.16	1.40	0.45	0.008	0.020	0.20	0.20	0.20	-	0.055	0.08	0.080	0.040	0.020	-	0.0005	0.0120	-	-	-	-
			Min	-	-	0.15	-	-	-	0.01	-	-	0.020	-	-	-	-	-	-	-	-	-	-	-
10756K		Heat analysis		0.15	1.23	0.20	0.005	0.012	0.06	0.04	0.07	0.004	0.037	0.01	0.069	0.001	0.001	0.0019	0.0003	0.0079	0.0050	0.0010	0.0010	0.0010
10756K	18-1838	Product analysis		0.15	1.21	0.22	0.004	0.012	0.06	0.03	0.07	0.002	0.030	0.02	0.069	0.002	0.001	0.0020	0.0002	0.0070	0.0060	0.0010	0.0000	0.0000
10756K	18-1838	Product analysis		0.15	1.21	0.21	0.004	0.011	0.06	0.03	0.07	0.002	0.031	0.02	0.069	0.002	0.001	0.0020	0.0002	0.0070	0.0060	0.0010	0.0000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu	CE_IIW
			Max	-	0.100	0.120	0.800	0.43
			Min	2.00	-	-	-	-
10756K		Heat analysis		4.68	0.070	0.071	0.173	0.39
10756K	18-1838	Product analysis		4.29	0.071	0.072	0.180	0.39
10756K	18-1838	Product analysis		4.43	0.071	0.072	0.180	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. Romania 127/88/91

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

29.11.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer:	MILL TEST CERTIFICATE	Page 2/4	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.2/2004 -	B 16062/1 23.11.2018	

Buyer:	ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -
Buyer's reference	PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract	**50003854**	Dimensions: 323.90 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
4	-		205	-	20.5	5	-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.88
		mm	inch	mm	inch	mm	inch	mm²	inch²							
10756K	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	18-4171	407.00	-	543.00	-	42.70	0.75
10756K	Longitudinal Flat	-	-	20.00	-	13.60	-	272.0	-	18-3289	404.40	-	511.00	-	33.00	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
10756K	18-6736	Transversal	10x10x55	-50	20.0	103	94	93	27.0	97	-	-	-	90	90	90	0.88	0.80	0.79
10756K	18-6737	Longitudinal	10x10x55	-50	-	146	132	143	50.0	140	-	-	-	95	95	95	1.29	1.16	1.27

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
10756K	18-3503	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length (m)	Weight (kg)
10756K	10	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. Romania 127/08/91

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

29.11.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -					Page 3/4 **B 16062/1** **23.11.2018**		ArcelorMittal
Buyer: ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS		STANDARD SEAMLESS PIPES					Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces: 10 Bundles: -
		Standard: API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015						
Buyer's reference PO.NO.: 3200063376		Dimensions: 323.90 x 12.70 mm -		Schedule: -			Length: 10.00 - 12.00 m -	-	
Contract 50003854									
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P -		
4	-		205	-	20.5	5			

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 12.70 -

API 5L/–ISO 3183/EN 10225/EN10210-1-2/X52NO/L360NO/S355 G15+N/S355 NLH

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -18-0038/CPR/BUC 10 00067/A

Manufacturing process – hot rolling

The steel is electric arc furnace process.All steels is be fully killed and made to fine grain practice, source G300047.

Visual inspection and dimensional check without objection.

Heat treatment: normalizing at temperature 890-920°C, time soaking 13-14 min.

NDT full body:

- 100% ultrasonic method, longitudinal and transverse, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- ultrasonic inspection for detection of laminar imperfections on the pipe body in according to ISO 10893-8, the coverage 100% of the pipe surface, acceptance criteria according to table K1 of API 5L & ISO 3183.

NDT for the pipe ends:

- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
- wet magnetical particles testing on the pipe ends – satisfactory.

Both pipe ends have been inspected over 400 mm length by MPI method - satisfactory results.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA

18
0038/CPR/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355 NLH

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Inspector/Buyer representative
Witnessed/Reviewed
Florin Hriscu
29.11.2018

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 16062/1 23.11.2018	ArcelorMittal

Buyer:	ARCELORMITTAL PROJECTS EUROPE B.V. MANNESMANNWEG 5,4794SL HEIJNINGEN NETHERLANDS	STANDARD SEAMLESS PIPES	Total weight: 10.196 tons - lbs	Total Length: 104.62 meters - feets	Pieces 10	Bundles -
Buyer's reference	PO.NO.: 3200063376	**Standard:** API 5L ed. 45-2012; PSL2; ISO 3183-2012/Amd.1:2017; EN 10225-2009; EN 10210-1-2-2006; Spec.TPS for EU-Stock Rev.09-15.08.2017 & Tehnical Offer AMR No. dated 10.10.2017; NORSOK M120 MDS Y 22 Rev.5/June 2007- AMTR Technical offer nr.15 rev.1/01.09.2016;ANSI/ NACE MR0103/ISO17945-2015; NACE MR 0175/ISO 15156-1-2/2015				
Contract	**50003854**	Dimensions: 323.90 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO/L360NO/S355G15+N/S355NLH-P
4	-		205	-	20.5	5	-

Magnetism residual max 30 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Damoc Ciprian

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. Romania 127/88/91

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

29.11.2018

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

DETAILED PACKING LIST
P. O. NO. 50003854 ITEM - 4

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

Buyer:

ARCELORMITTAL PROJECTS EUROPE B.V.
MANNESMANNWEG 5,
4794SL HEIJNINGEN
NETHERLANDS

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

29.11.2018

Descriptn of Goods &/ or Services:

STANDARD SEAMLESS PIPES

Customer PO No.: 3200063376

OD(mm)	WT(mm)	STEEL GR.
323.90	12.70	X52NO/L360NO/S355G15+N/S355NLH

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-18-43-312	10756K	10.33	1007
2	2-18-43-313	10756K	10.48	1021
3	2-18-43-321	10756K	10.51	1024
4	2-18-43-320	10756K	10.21	995
5	2-18-43-317	10756K	10.23	997
6	2-18-43-318	10756K	10.40	1014
7	2-18-43-314	10756K	10.54	1027
8	2-18-43-319	10756K	10.10	984
9	2-18-43-322	10756K	10.37	1011
10	2-18-40-2816	10756K	11.45	1116

TOTAL NUMBER OF PIECES:	10
TOTAL METERS:	104.62
TOTAL KILOS:	10 196

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 23.11.2018

ArcelorMittal Tubular Products Roman S.A. Roman 1911

283/ 3402

DTM 1386783/2

Copy

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

Customer – Besteller –Acheteur – Committente:

Part – Teil –Partie – Parte: **incomplete**

Order No – Bestell-Nr. –N° de la commande – N° dell'ordine: **UPO140006 REV00**

dated – vom –date – in data: **16.09.2013**

Manufacturer – Hersteller –Fabricant – Produttore:

Vallourec Deutschland GmbH, Mülheim / Germany

Works-No – Werks-Nr. – N° usine – Commessa N°: **852/07814**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:

EN 10225:2009, NACE MR 0175/ISO 15156-2:2009 Paragraph A.2.1.2, ISO 3183:2012 (Modified) / API 5 L, 12.2012 / *

Material – Werkstoff –Matière – Materiale: according to – enstprechend –suivant – secondo: Edition – Ausgabe –Edizione:

S355G15+N / X 52 N mod. PSL 2 / L 360N Mod. PSL 2 / S355EM mod. requirements as above

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:

Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:

Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore:

LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:

V&M04

Marking – Kennzeichung –Marquage – Punzonature:

see attached works test certificates.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pcs	**Seamless Hot Finished Seamless Steel Tubes for Construction RL at the upper limit (Ends bevelled, angle 30 degrees)**		
3	**-18-**	**114,3 o.d. x 17,12 w.th. mm Total length: 210,91 m Weight: 8.812 kg**	**310304**	**G857, M542A M542**
11	**-19-**	**168,3 o.d. x 12,7 w.th. mm Total length: 219,61 m Weight: 10.945 kg**	**345801**	**M536, M536A**
12	**-19-**	**168,3 o.d. x 18,3 w.th. mm Total length: 219,71 m Weight: 15.297 kg**	**345801**	**M537, M537A**
13	**-6-**	**168,3 o.d. x 21,95 w.th. mm Total length: 69,03 m Weight: 5.593 kg**	**345801**	**M620, M620 1), M620A, M620A 1)**

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisiti richiesti cone da allegati.

Location – Ort –Lieu – Localita **Dortmund**

*** / NORSOK MDS - Y22 REV. 5, 06.2007.**

Date – Datum –Data **26 March 2014**

FOR THE SURVEYORS: A. SCHWARTZ
Surveyor to Lloyd's Register EMEA

A subsidiary of Lloyd's Register Group Limited
(CEOC Member Organisation)
Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:

Works test certs nos. 39958Mu14, 40833Mu14, 39959Mu14, 40898Mu14 and 40899Mu14.

1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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DTM 1386783/2

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Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
		Seamless Hot Finished Seamless Steel Tubes for Construction **RL at the upper limit** **(Ends bevelled, angle 30 degrees)**		
13	**-13-**	**168,3 o.d. x 21,95 w.th. mm** **Total length: 147,29 m Weight: 11.937 kg**	**345801**	**M620, M620A, M620 1), M620A 1)**
14	**-21-**	**168,3 o.d. x 25,4 w.th. mm** **Total length: 208,00 m Weight: 18.979 kg**	**345801**	**M621, M621 1) M621A, M621A 1)**
Total	**-96-**	**Total weight: 71.563 kg**		

Vallourec Deutschland GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004
		No. : 40898Mu14 (A03) Page: 1 / 6 Date: 27.02.2014

(A01) **Vallourec Deutschland GmbH**	(A08.1) **Vallourec-Order-No.** 85207814 (A08.2) **Suborder**
(A06.1) Customer	
(A06.2) **Orderer**	(A07.2) **Order-No.** UPO140006 REV00 **Date** 16.09.2013
(A06.3) **Client´s Client**	(A07.3) **Order-No.** V4777

(B01, B02, B04) **Description of the product**	HOT FINISHED SEAMLESS STEEL TUBES FOR CONSTRUCTION SEAMLESS RL AT THE UPPER LIMIT ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH IN BUNDLES OF MAX. 3000 KG EN 10225:2009 NACE MR 0175/ISO 15156-2:2009 PARAGRAPH A.2.1.2 ISO 3183:2012 (MODIFIED) / API 5 L, 12.2012 / NORSOK MDS - Y22 REV. 5, 06.2007 OS MULTISPEC S355G15+N/X52N MOD. PSL 2/L360N MOD. / PSL 2/GRADE S355EM MOD. / DATA SHEET OFFSHORE MULTISPEC S355G15+N / X52N MOD., OM-01 REV. 3, 19/08/2013, PARA. 1-11 DTM- NO.: 1386783

(A10)
Inspection by LLOYD´S REGISTER EMEA

(A13) Vallourec Item	(A09) Cust. Item	(B14) Item text	(B09) Dimensions	(B10) Single length
13			O.D. 168,3 MM X WTH. 21,95 MM	IN RANDOM MILL LENGTH 9800 - 11800 MM

0000018-00022/00051

Vallourec Deutschland GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 40898Mu14 (A03) Page: 2 / 6 Date: 27.02.2014

(A13) Vallourec Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
13		6	69.03	5.593

Vallourec Item	Delivery Note-No	Packing list-No
13	61593	

(C71)

HEAT CHEMICAL ANALYSIS

(B07 1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	-	-	-	-	-	-	-	-
max	-	0.150	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
345801	Oxygen (BOF)	0.140	0.290	1.43	0.016	0.0020	0.032	0.010	0.050	0.120	0.010

(B07 1) Heat	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.080	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100	43	.25
345801	0.070	0.0020	0.0020	0.005	0.034	0.0107	0.004	0.0005	0.0021	0.0030	41	.24

(B07 1) Heat	EF 02 %	EF 10 %
min	-	-
max	0.12	0.80
345801	0.11	0.19

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

Heats fully killed

AL >= 2 X N

0006018-00023/00051

Vallourec Deutschland GmbH (A01)
Werk Mülheim
Rohrkontistraße
Schützenstrasse 124
45476 Mülheim an der Ruhr

vallourec

INSPECTION CERTIFICATE (A02)
3.2 EN 10204:2004

No. : 40898Mu14 (A03)

Date: 27.02.2014

(C71)

HEAT CHEMICAL ANALYSIS

EF3 = V + NB MAX 0,100 = S 0,094 / K 0,100 / K 0,099

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.250	-	-	-	-	-	-	-	-
max		0.150	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
345801		0.133	0.297	1.43	0.017	0.0013	0.033	0.014	0.048	0.129	0.005
345801		0.131	0.297	1.43	0.016	0.0013	0.033	0.013	0.048	0.128	0.005

(B07.1) Heat	(C00.1) Test Piece	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.080	0.0200	0.0200	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100
345801		0.066	0.0019	0.0010	0.003	0.034	0.0110	0.001	0.0002	0.0024	0.0014
345801		0.065	0.0019	0.0020	0.003	0.033	0.0111	0.001	0.0002	0.0027	0.0012

(B07.1) Heat	(C00.1) Test Piece	CQ 03 %	CQ 08 %	EF 02 %	EF 10 %
min		-	-	-	-
max		.43	25	0.12	0.8
345801		.40	.23	0.10	0.2
345801		.40	.23	0.10	0.2

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

MATERIAL IS FINE GRAINED AND FULLY KILLED

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

0000018-00024/00051

Vallourec Deutschland GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 40898Mu14 (A03) Page: 4 / 6 Date: 27.02.2014

TENSILE TEST RESULTS

Location (C01.1)	OUTSIDE CONCERNING WALL

(B07.1) Heat	(C00.1) Test Piece	(C10) Diameter	(C11) YS	(C12) TS	(C13) Elong	(C14.1) Ratio					
		mm	ReH MPa	R_m MPa	$5{,}65\sqrt{S_o}$ %	R/R_m -					
min		-	355	460	22.0	-					
max		-	-	620	-	0.88					
345801	M620 1)	12.00	453	526	31.0	0.86					
345801	M620A 1)	11.99	445	533	28.5	0.84					

TENSILE TEST RESULTS

Type (C10.1)	ROUND TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Diameter	(C11) YS	(C12) TS	(C13) Elong	(C14.1) Ratio					
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -					
min		-	360	460	26.5	-					
max		-	530	760	-	0.93					
345801	M620	12.47	379	534	35.5	0.71					
345801	M620A	12.45	381	538	35.5	0.71					

TEST MATERIAL MARKED BY 1) ANNEALED AS FOLLOWS:
600 DEGREES C - 240 MIN /AIR

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 40 DEGREES C
Direction (C02)	longitudinal

0000018.00025/00051

Vallourec Deutschland GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 40898Mu14 (A03) Page: 5 / 6 Date: 27.02.2014

IMPACT TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min max		- -	35.0 -	35.0 -	35.0 -	50.0 -					
345801	M620 1)	0.800	161	173	115	150					
345801	M620A 1)	0.800	174	180	189	181					

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min max		- -	35.0 -	35.0 -	35.0 -	50.0 -					
345801	M620	0.800	124	133	117	125					
345801	M620A	0.800	164	159	155	159					

TEST MATERIAL MARKED BY 1) ANNEALED AS FOLLOWS:
600 DEGREES C - 240 MIN./AIR

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT		5 MIN 920 DEGREES C VENTILATOR	
HEAT TREATMENT	NORMALIZED		
HYDROSTATIC TEST	205 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
PIPE PRODUCTION METHOD	SEAMLESS, HOT-ROLLED		
HARDNESS TEST	HRC MAX. 22 IN ACC. TO NACE MR 01-75		

ULTRASONIC TEST ACC. TO API 5L
FOR LONGITUDINAL DEFECTS,INSIDE AND OUTSIDE : SATISFACTORY
ULTRASONIC TESTING FOR LAMINATIONS ACC TO EN ISO 10893-8,
KL. U3 :SATISFACTORY
UNINSPECTED ENDS CUT OFF

0000016-00028/0095

Vallourec Deutschland GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 40898Mu14 (A03) Page: 6 / 6 Date: 27.02.2014

(A04, B06)

MARKING, IDENTIFICATION

13	VALLOUREC	DIE STAMPED ON ONE SIDE WITH ROUND NOSE TOOLS VALLOUREC LOGO MANUFACTURER´S NAME MANUFACTURER´S MARK HEAT-NO. OSMULTISPEC S355G15+N/X52N MOD. / L360N MOD. / GRADE S355EM MOD. WA INSPECTOR´S SIGN PAINT STENCILED ON ONE SIDE COLOUR FREE OFF PB,ZN,CU,SN AND CD VALLOUREC LOGO MANUFACTURER´S NAME MANUFACTURER´S MARK CUSTOMER ORDER-NO. UPO140006 REV00 168,3 X 21,95 TUBE/PIPE LENGTH M TERMS OF DELIVERY EN 10225 OSMULTISPEC S355G15+N/X52N MOD. / L360N MOD. / GRADE S355EM MOD. PROCESS OF MANUFACTURE SMLS HEAT-NO. TEST PRESSURE BAR 205 PIPE NO. (TALLY-NR.) 85207814 VLR ITEM-NO 13 US LONGITUDINAL COLOUR STRIPE WITH PART OFF FRONT FACE ACC. PICTURE 4 EN10225:2001 BLUE BLUE

Warning Notice: The Vallourec Group is currently changing its markings on tubes/pipes and on associated documentation. For technical reasons, please be informed that the manufacturer´s references marked on the products (logo and/or company name) may temporarily diverge from the contractual documents (until June 2014).

Enclosures

TALLY LIST SEE APPENDIX

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	27.02.2014	10 MAR 2014
Validated by	Inspection Representative	Third Party Representative
	DEYMANN D. Deymann	Lloyd's Register EMEA M. Mielke Business Centre South West Lloyd's Register
☎	(0208) 810-4650	
🖷	(0208) 810-5659	
@	DIETER.DEYMANN@VALLOUREC.COM	
Stamp		

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

vallourec

Continuous Mandrel Mill MH

Vallourec Order No.: 852 / 0781 4
Vallourec Auftrag
No.de Commande

Pos.-Nr.: 013
Item-No.

Customer:
Kunde/Client

P.O. Nr. UPO140006 REV00
No

User:
Verwender/

P.O. Nr:
No.

Adresse:
Warenempfänger/adresse

Destination:
Bestimmungsland

Tally - List
Rohr Liste / List De Colisage

PROJECT:

Dimension

Outside Diameter - Wall Thickness
Aussendurchmesser/Diametre Exterieur - Wanddicke/Expaisseur

168,3 X 21,95 mm

S355G15+N-OSMULT

No of pieces Anzahl / Nombre de pieces	Length Länge/ Longeur (m)	Length Länge/ Longeur (ft)	Weight Gewicht/Poids (kg)	Weight Gewicht/Poids (lbs)
19	216,32	709,71	17530	38647

VAD Order	Item no.	Grade	Dimension
852 / 0751 4	013	S355G15+N-OSMULT	168,3 X 21,95 mm

Pipe-no.	Lenght/Länge/Longueur		Weight/Gewicht/Poids		Heat-no.	Lot-no.
Rohr/Tube	(m)	(ft)	(kg)	(lbs)	No de Coulee	
1	11,476	37,651	932,0	2.054,7	345801	0000
2	11,524	37,808	935,5	2.062,4	345801	0000
3	11,497	37,720	931,5	2.053,6	345801	0000
4	11,579	37,989	932,5	2.055,8	345801	0000
5	11,539	37,858	933,5	2.058,0	345801	0000
6	11,415	37,451	928,0	2.045,9	345801	0000
7	11,544	37,874	937,0	2.065,7	345801	0000
8	11,467	37,621	930,5	2.051,4	345801	0000
9	11,380	37,336	930,0	2.050,3	345801	0000
10	11,483	37,674	933,0	2.056,9	345801	0000
11	10,800	35,433	867,5	1.912,5	345801	0000
12	11,482	37,671	928,0	2.045,9	345801	0000
13	10,711	35,141	868,5	1.914,7	345801	0000
14	11,481	37,667	932,5	2.055,8	345801	0000
15	11,471	37,635	928,5	2.047,0	345801	0000
16	11,429	37,497	928,0	2.045,9	345801	0000
17	11,527	37,818	927,0	2.043,7	345801	0000
18	11,009	36,119	893,0	1.968,7	345801	0000
19	11,503	37,740	932,0	2.054,7	345801	0000

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

+ 39 035 560 111 tel
+ 39 035 560 3827 fax

INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02152	**1 / 12**

Date / Data: **February 15, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	**20**	**1252135/020**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED **BONIFICATI**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISI** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **21Pcs/Pz**	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	**32.808 ft ÷ 38.714 ft**	**797'02" ft** **124748,4 lb**	**160.37 lb/ft**
ø 406.40mm O.D. x 25.40mm W.T	.	**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031228234 / 000200 Shipping note: Address:	Town: Country:

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta				Specimen dimensions Dimensioni della provetta		Test temp Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.85	Elongation / Allungamento			
			Ls	Sc	Type Tipo	Ori	Size Dimensioni	Area Area	Temp.				Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
986002	Z8812	25	B	PWHT	Cs	L	12.69	126.50	+20	427.00	531.00	0.80	2"	50.8	20.0%	32.5%
987210	Z8808/C	3	B	PWHT	Cs	L	12.68	126.30	+20	446.00	554.00	0.81	2"	50.8	20.0%	30.0%
987212	Z8802	3	B	PWHT	Cs	L	12.70	126.70	+20	466.00	571.00	0.82	2"	50.8	20.0%	29.5%

A Bucella
GE 361070

B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Req: Required / Richiesto
Cs: Cylindrical specimen / Cilindrica	Max: Maximum / Massimo	PWHT: Post weld heat treatment / Trattamento dopo	Sc: Specimen condition / Condizioni Provetta
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	saldatura	U.T.S: Ultimate Tensile Strength / Rottura
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Req. Max: Required maximum / Massimo richiesto	Y.S: Yield Strength / Snervamento

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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

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TENSILE TEST / PROVA DI TRAZIONE

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.85	Elongation / Allungamento			
			Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area					Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
986002	Z8812	25	B	QT	Cs	L	12.46	121.90	+20	417.00	531.00	0.79	2"	50.8	20.0%	30.0%
987210	Z8808/C	3	B	QT	Cs	L	12.70	126.70	+20	456.00	564.00	0.81	2"	50.8	20.0%	28.5%
987212	Z8802	3	B	QT	Cs	L	12.69	126.50	+20	468.00	575.00	0.81	2"	50.8	20.0%	29.0%

B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Sc: Specimen condition / Condizioni Provetta
Cs: Cylindrical specimen / Cilindrica	Max: Maximum / Massimo	QT: Quenched and tempered / Bonificato	U.T.S: Ultimate Tensile Strength / Rottura
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req. Max: Required maximum / Massimo richiesto	Y.S: Yield Strength / Snervamento
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Req: Required / Richiesto	

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.85	Elongation / Allungamento			
			Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area					Lo 5D = 5.65√So	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
986002	Z8812	25	B	PWHT	Cs	L	10.05	79.30	+20	429.00	541.00	0.79	5D	50.0	20.0%	27.0%
987210	Z8808/C	3	B	PWHT	Cs	L	10.01	78.70	+20	447.00	562.00	0.80	5D	50.0	20.0%	26.5%
987212	Z8802	3	B	PWHT	Cs	L	10.00	78.50	+20	459.00	567.00	0.81	5D	50.0	20.0%	26.0%

B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Req: Required / Richiesto
Cs: Cylindrical specimen / Cilindrica	Max: Maximum / Massimo	PWHT: Post weld heat treatment / Trattamento dopo	Sc: Specimen condition / Condizioni Provetta

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Tenaris

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02152	**3 / 12**

Date / Data: **February 15, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - It	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	**20**	**1252135/020**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED **BONIFICATI**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 21Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	**32.808 ft ÷ 38.714 ft**	**797'02" ft** **124748,4 lb**	**160.37 lb/ft**
ø 406.40mm O.D. x 25.40mm W.T.	.	**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

TENSILE TEST / PROVA DI TRAZIONE

L: Longitudinal / Longitudinale	Min: Minimum / Minimo	saldatura	U.T.S: Ultimate Tensile Strength / Rottura
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Req. Max: Required maximum / Massimo richiesto	Y.S: Yield Strength / Snervamento

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. EUL 0.5%	U.T.S. Req.	Y.S./U.T.S	Elongation / Allungamento			
			Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area / Area		Min: 360.00 Max: 530.00	Min: 460.00 Max: 620.00	Req. Max. 0.85	Lo 5D = 5.65√So	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
986002	Z8812	25	B	QT	Cs	L	9.98	78.20	+20	434.00	542.00	0.80	5D	50.0	20.0%	26.5%
987210	Z8808/C	3	B	QT	Cs	L	9.99	78.40	+20	457.00	564.00	0.81	5D	50.0	20.0%	27.0%
987212	Z8802	3	B	QT	Cs	L	9.97	78.10	+20	477.00	579.00	0.82	5D	50.0	20.0%	25.5%

B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Sc: Specimen condition / Condizioni Provetta
Cs: Cylindrical specimen / Cilindrica	Max: Maximum / Massimo	QT: Quenched and tempered / Bonificato	U.T.S: Ultimate Tensile Strength / Rottura
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req. Max: Required maximum / Massimo richiesto	Y.S: Yield Strength / Snervamento
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Req: Required / Richiesto	

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

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Date / Data: **February 15, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	**20**	**1252135/020**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED **BONIFICATI**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **21Pcs/Pz**	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.		**32.808 ft ÷ 38.714 ft**	**797'02" ft** **124748,4 lb**	**160.37 lb/ft**
ø 406.40mm O.D. x 25.40mm W.T.		**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

Composition % / Composizione %

				X 100										X 1000								X 10000					
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	F2	F3	F4	P	S	Sn	Al	Ti	Nb	V	As	N	B	Pb	Sb	Ca	Bi
			H Max	18	140	45	30	25	8	35	42	12	--	10	80	20	3	20	60	20	40	50	20	120	5	100	100	50	100
			Min	--	--	15	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heat N°	Sample N°	Lot N°	P Max	18	140	45	30	25	8	35	42	12	--	10	80	20	3	20	60	20	40	50	20	120	5	100	100	50	100
Colata N°	Prova N°	Lotto N°	Min	--	--	15	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
986002			H	11	107	25	13	15	6	16	36	4.4	381.58	4.2	50	13	2	13	30	2	12	30	7	76	2	10	26	12	1
986002	Z8812	25	P	11	105	24	12	16	6	15	35	4.2	325.58	4.1	49	13	2	10	28	1	11	30	6	86	2	2	14	10	1
986002	Z8813/C	25	P	12	109	25	12	16	6	16	37	4.3	301.2	4.2	50	14	2	12	28	1	12	30	7	83	1	9	25	10	1
987210			H	11	110	25	10	17	6	10	36	4.6	490.9	4.4	43	13	1	10	28	2	14	30	5	55	2	5	23	13	9
987210	Z8808/C	3	P	13	108	25	10	17	6	10	38	4.4	440.68	4.2	43	15	1	9	27	2	12	30	4	59	2	2	11	8	1
987210	Z8809	3	P	11	105	24	9	16	5	9	35	4.2	416.67	4.1	39	13	1	8	26	1	11	30	4	60	1	5	12	11	1
987212			H	10	110	25	9	18	7	10	36	6.4	540	6.2	44	11	1	10	27	2	12	50	4	50	2	3	20	13	6
987212	Z8802	3	P	12	111	25	9	18	7	10	38	5.3	416.67	5.1	44	12	2	8	26	2	11	40	4	60	2	2	9	8	1
987212	Z8803/C	3	P	12	112	26	9	18	7	10	38	5.3	383.33	5.1	44	11	2	8	28	2	11	40	4	60	2	2	13	11	1

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V +Ti)
F2: (Al Sol/N)
F3: (Nb+V)
F4: (Cr+Mo+Ni+Cu)
H: Heat / Colata
Max: Maximum / Massimo
Min: Minimum / Minimo
P: Product / Prodotto

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

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Date / Data: **February 15, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - It	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	20	1252135/020

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Scheduia:	Length / Lunghezza:	Quantity / Quantità: 21Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T. ø 406.40mm O.D. x 25.40mm W.T.	. .	32.808 ft ÷ 38.714 ft 10000 mm ÷ 11800 mm	797'02" ft 124748,4 lb 242.98 mt 56585 kg	160.37 lb/ft 238.66 Kg/m

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

Required values / Valori richiesti			Individuals / Individuali			Average / Media			Hardness type / Tipo de dureza: vickers			Formula applied / Formula Applicata
			Min: –	Max: 235.0	Var: –	Min: –	Max: –	Var: –	Minimum martensite / martensite minima: (%): –			

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition Ls	Specimen condition Sc	Quad.	Scale / Scala	OD 1	OD 2	OD 3	OD 4	OD Dist. (mm)	OD Avg.	MW 1	MW 2	MW 3	MW 4	MW Avg.	ID 1	ID 2	ID 3	ID 4	ID Dist. (mm)	ID Avg.
986002	Z8812	25	B	QT	1	HV10	190.0	188.0	178.0	183.0	- 1.50	184.8	169.0	169.0	174.0	168.0	170.0	157.0	155.0	157.0	160.0	1.5	157.3
987210	Z8808/C	3	B	QT	1	HV10	191.0	194.0	196.0	197.0	- 1.50	194.5	179.0	178.0	176.0	178.0	178.3	175.0	166.0	179.0	174.0	1.5	173.5
987212	Z8802	3	B	QT	1	HV10	205.0	204.0	199.0	205.0	- 1.50	203.3	183.0	183.0	179.0	176.0	180.3	166.0	161.0	164.0	163.0	1.5	163.5

Avg: Average / Media
B: Body / Corpo
Dist: Distance from outer diameter / Distanza dal diametro esterno
ID: Internal Diameter / Diametro interno
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
MW: Middle Wall / Centro da espessura
OD: Outside Diameter / Diametro esterno
QT: Quenched and tempered / Bonificato
Quad: Quadrant / Quadrante
Sc: Specimen condition / Condizioni Provetta
Var: Variation / Variazione

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV				Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
986002	Z8812	outside	25	B	PWHT	10 x 10.00	422.0	384.0	407.0	404.0
987210	Z8808/C	outside	3	B	PWHT	10 x 10.00	384.0	365.0	430.0	393.0

Type/Tipo: KCV				Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
987212	Z8802	outside	3	B	PWHT	10 x 10.00	435.0	370.0	374.0	393.0

Avg: Average / Media
B: Body / Corpo
Minimo singolo richiesto
L: Longitudinal / Longitudinale
PWHT: Post weld heat treatment / Trattamento dopo saldatura
media richiesta
Sc: Specimen condition / Condizioni Provetta

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
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Date / Data: **February 15, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	**20**	**1252135/020**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED **BONIFICATI**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **21Pcs/Pz**	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	**32.808 ft ÷ 38.714 ft**	**797'02" ft** **124748,4 lb**	**160.37 lb/ft**
ø 406.40mm O.D. x 25.40mm W.T	.	**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

IMPACT TEST / PROVA DI RESILIENZA

Ind. Min. Req: Individual Minimum Required / Ls: Location of sample / Ubicazione provetta Req. Min. Avg: Required minimum average / Minima Temp: Temperature / Temperatura

Type/Tipo: KCV | Orientation/Direzione: L | Unit / Unità: JOULE
Position/Posizione: | Temp: - 50 | Unit/Unità: °C | Ind.Min.Req: 35 | Req.Min.Avg: 50

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
986002	Z8812	outside	25	B	QT	10 x 10.00	354.0	411.0	400.0	388.0
987210	Z8808/C	outside	3	B	QT	10 x 10.00	347.0	359.0	375.0	360.0

Type/Tipo: KCV | Orientation/Direzione: L | Unit / Unità: JOULE
Position/Posizione: | Temp: - 50 | Unit/Unità: °C | Ind.Min.Req: 35 | Req.Min.Avg: 50

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
987212	Z8802	outside	3	B	QT	10 x 10.00	367.0	338.0	316.0	340.0

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
L: Longitudinal / Longitudinale
Ls: Location of sample / Ubicazione provetta
QT: Quenched and tempered / Bonificato
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
Temp: Temperature / Temperatura

Type/Tipo: KCV | Orientation/Direzione: T | Unit / Unità: JOULE | Shear area / Area duttile %
Position/Posizione: | Temp: 0 | Unit/Unità: °C | Ind.Min.Req: 20 | Req.Min.Avg: 27 | Ind.Min.Req: -- | Req.Min.Avg: --

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.	Results / Risultato 1	2	3	Avg.
986002	Z8812	outside	25	B	QT	10 x 10.00	418.0	422.0	417.0	419.0	100	100	100	100
987210	Z8808/C	outside	3	B	QT	10 x 10.00	420.0	415.0	412.0	416.0	100	100	100	100
987212	Z8802	outside	3	B	QT	10 x 10.00	428.0	402.0	416.0	415.0	100	100	100	100

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
QT: Quenched and tempered / Bonificato
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T: Transversal / Trasversale
Temp: Temperature / Temperatura

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INSPECTION CERTIFICATE
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Date / Data: February 15, 2019

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	19117/14759	20	1252135/020

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 21Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T. ø 406.40mm O.D. x 25.40mm W.T.	. .	32.808 ft ÷ 38.714 ft 10000 mm ÷ 11800 mm	797'02" ft 124748,4 lb 242.98 mt 56585 kg	160.37 lb/ft 238.66 Kg/m

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE			
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
986002	Z8812	outside	25	B	PWHT	10 x 10.00	342.0	388.0	363.0	364.0
987210	Z8808/C	outside	3	B	PWHT	10 x 10.00	306.0	344.0	366.0	339.0

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE			
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
987212	Z8802	outside	3	B	PWHT	10 x 10.00	297.0	326.0	342.0	322.0

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
PWHT: Post weld heat treatment / Trattamento dopo saldatura
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T: Transversal / Trasversale
Temp: Temperature / Temperatura

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE			
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
986002	Z8812	outside	25	B	QT	10 x 10.00	342.0	414.0	367.0	374.0
987210	Z8808/C	outside	3	B	QT	10 x 10.00	376.0	368.0	345.0	363.0

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE			
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
987212	Z8802	outside	3	B	QT	10 x 10.00	428.0	352.0	353.0	378.0

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
QT: Quenched and tempered / Bonificato
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T: Transversal / Trasversale
Temp: Temperature / Temperatura

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Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02152	8 / 12

Date / Data: **February 15, 2019**

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	19117/14759	20	1252135/020

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 21Pcs/Pz	Nominal Weight / Peso nominale:
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ø 406.40mm O.D. x 25.40mm W.T.	.	10000 mm ÷ 11800 mm	242.98 mt 56585 kg	238.66 Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	20.5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:^ Revision year:....	Norma:API 5L Anno:2018 Revisione:^ Anno della revisione:....
Standard:EN 10225 Year:2009	Norma:EN 10225 Anno:2009
Standard:NACE MR0175/ISO 15156 Year:2015	Norma:NACE MR0175/ISO 15156 Anno:2015
Standard:NACE MR0103/ISO 17945 Year:2015	Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Standard or specification'	La nota 1 è la descrizione completa delle 'Norme o specifiche'
ACC. TO THE NORM API 5L PSL2 46TH ED., EN 10225, TD001 REV.24, NACE MR0175/ISO 15156-2, NACE MR0103 + TQ 20035891 V8.2	NORMA API 5L PSL2 46A EDIZ., EN 10225, TD001 REV.24, NACE MR0175/ISO 15156-2, NACE MR0103 + TQ 20035891 V8.2
Note 2 is the full description of the 'Steel grade'	La nota 2 è la descrizione completa del 'Grado acciaio'
STEEL GR. X52 Q /L360Q PSL2, S355G14+QT S355G15+QT EN10225	ACCIAIO GR. X52 Q /L360Q PSL2, S355G14+QT S355G15+QT EN10225

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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
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Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 21Pcs/Pz	Nominal Weight / Peso nominale:
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ø 406.40mm O.D. x 25.40mm W.T	-	10000 mm ÷ 11800 mm	242.98 mt 56585 kg	238.66 Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
Country of melt ITALY Continuous casting and Fully killed Quantity detail for heat: please see tally-list	Paese di colaggio acciaio ITALIA Colaggio continuo ed acciaio di tipo calmato Dettaglio tubi per colata: vedere Tally-list

Supplementary Information Informazioni supplementari	
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 30 GAUSS HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156 HARDNESS HBW 235 MAX, ACCORDING TO NACE MR0103/ISO 17945 PIPES HAVE BEEN QUENCHED AND TEMPERED: AUSTENITIZING TEMP. AT 920 °C FOR 26 MINS, QUENCHED IN WATER AND TEMPERED AT 680 °C FOR 60 MINS. THE WALL THICKNESS, CONTROLLED BY U.T., OF EACH PIPE IS WITHIN THE REQUESTED TOLERANCE ISO 10893-12. ALL PIPES HAVE BEEN TESTED FOR LAMINATION DETECTION BY U.T., WITH SATISFACTORY RESULT ISO 10893-8 U2. THE ENDS (FOR 300 mm) HAVE BEEN TESTED WITH WET FLUORESCENT MAGNETIC PARTICLES, WITH SATISFACTORY RESULT ALL PIPES HAVE BEEN TESTED BY ULTRASONIC INSPECTION FOR TRANSVERSAL/LONGITUDINAL INSIDE/OUTSIDE DEFECTS (NOTCH 5,0 %) ACCORDING TO SPEC. ISO 10893-10 U2C, WITH SATISFACTORY RESULT PWHT TEST SAMPLES AT 600 °C FOR 240'	DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESENTA UN MAGNETISMO RESIDUO SUPERIORE A 30 GAUSS DUREZZA HRC 22 MAX, IN ACCORDO ALLA SPEC. NACE MR0175/ISO 15156 DUREZZA HBW 235 MAX, IN ACCORDO ALLA SPEC. NACE MR0103/ISO 17945 TUTTI I TUBI SONO STATI BONIFICATI: RISCALDATI A 920 °C PER 26 MIN., TEMPRATI IN ACQUA E RINVENUTI A 680 °C PER 60 MIN. LO SPESSORE DEI TUBI, CONTROLLATO CON ULTRASUONI, E' CONFORME ALLE TOLLERANZE RICHIESTE ISO 10893-12. I TUBI SONO STATI CONTROLLATI PER LA RICERCA DI DOPPI SPESSORI CON ULTRASUONI, CON ESITO POSITIVO ISO 10893-8 U2. LE ESTREMITA' DEI TUBI SONO STATE CONTROLLATE (PER 300 mm) CON PARTICELLE MAGNETICHE FLUORESCENTI UMIDE, CON ESITO SODDISFACENTE TUTTI I TUBI SONO STATI CONTROLLATI CON U.S. PER LA RICERCA DI DIFETTI TRASVERSALI/LONGITUDINALI INTERNI/ESTERNI (TARATURA 5,0 %) IN ACCORDO ALLA SPEC. ISO 10893-10 U2C, CON ESITO SODDISFACENTE PROVE PWHT ESEGUITE A 600 °C PER 240'

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Date / Data: **February 15, 2019**	

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	19117/14759	**20**	**1252135/020**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED **BONIFICATI**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **TUBI S.S. LINE PIPE (CON RICHIESTE SUPPLEMENTARI)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISI** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 **Vedi nota nr.1**	**See note nr.2** **Vedi nota nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **21Pcs/Pz**	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	**32.808 ft ÷ 38.714 ft**	**797'02" ft** **124748,4 lb**	**160.37 lb/ft**
ø 406.40mm O.D. x 25.40mm W.T.	.	**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information	Informazioni supplementari
MATERIAL ACCORDING TO ASME B 36.10	MATERIALE IN ACCORDO ALLA ASME B 36.10
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE.
MANUFACTURED BY TENARIS DALMINE	FABBRICATO DA TENARIS DALMINE
NO WELD REPAIR, MERCURY AND RADIATION FREE	NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI
AS PER STANDARD, PIPES CAN BE REPAIRED; MANUFACTURER SHOULD DECIDE TO GRIND THE SURFACE OF THE PIPES WHEN, DURING FINAL VISUAL INSPECTION, SOME IMPERFECTIONS ARE DETECTED. THE RESULTED SURFACE AREAS, AFTER GRINDING, HAS DIFFERENT COLORATION COMPARED WITH USUAL ONE AS MANUFACTURED. THE RESIDUAL WALL THICKNESS AFTER GRINDING HAS BEEN CHECKED RESULTING IN TOLERANCE WITH STANDARD.	COME DA PROCEDURA STANDARD, I TUBI POSSONO ESSERE RIPARATI; IL COSTRUTTORE DOVREBBE PROCEDERE ALLA RETTIFICA DELLA LORO SUPERFICIE QUANDO DURANTE L'ISPEZIONE VISIVA FINALE VENGONO RILEVATE DELLE IMPERFEZIONI. DOPO LA RETTIFICA, LE AREE SUPERFICIALI INTERESSATE PRESENTANO UNA COLORAZIONE DIVERSA RISPETTO A QUELLA ORIGINALE. LO SPESSORE RESIDUO DELLE PARETI RIENTRA NELLA SOGLIA DI TOLLERANZA.
Tenaris IT identification number for MTC: 581'>gl	Numero Identificativo Tenaris IT per MTC: 581'>gl

MARKING / MARCATURA

Marking	Marcatura
STENCILING S355 G14+QT/S355G15+QT _C OLATA _T API Spec 5L 0038.1 _API _DATA 406,4 25,40 L3 60Q/X52Q PSL 2 SMLS EN 10225 S355 G14+QT/S355 G15+QT HEAT: _COLAT A MT _MT KG _KG NR. _NR PO 19117/14759 -	VERNICIATURA S355 G14+QT/S355G15+QT _C OLATA _T API Spec 5L 0038.1 _API _DATA 406,4 25,40 L3 60Q/X52Q PSL 2 SMLS EN 10225 S355 G14+QT/S355 G15+QT HEAT: _COLAT A MT _MT KG _KG NR. _NR PO 19117/14759 -

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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

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ø 406.40mm O.D. x 25.40mm W.T.	.	10000 mm ÷ 11800 mm	242.98 mt 56585 kg	238.66 Kg/m

MARKING / MARCATURA

Marking
Marcatura

LEGEND
_T = TENARIS Logo
_API = API Logo
_DATA = Marking Date
_MT = Pipe/Tube Length in meters
_KG = Pipe/Tube Weight in kilograms
_NR = Pipe/Tube identifier

PUNCHING
S355 G14+QT/S355G15+QT _C
OLATA

LEGEND
_COLATA = Heat Number

LEGENDA
_T = Logo TENARIS
_API = Logo API
_DATA = Data di marcatura
_MT = Lunghezza del tubo in metri
_KG = Peso del tubo in chilogrammi
_NR = Identificativo numerico del tubo

PUNZONATURA
S355 G14+QT/S355G15+QT _C
OLATA

LEGENDA
_COLATA = Numero di colata

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Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
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ø 406.40mm O.D. x 25.40mm W.T.	.	**10000 mm ÷ 11800 mm**	**242.98 mt** **56585 kg**	**238.66 Kg/m**

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance w purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Si certifica che il prodotto descritto è stato prodotto, provato, testato e controllato in conformità ai requisiti dell'ordine del cliente. Questo certificato non è una dichiarazione d'origine e non può essere usato come tale.

CUSTOMER THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT, UFFICIO CERTIFICAZIONE QUALITA' LATTANZI Sabrina	CHIEF OF QUALITY CERTIFICATION DEPT, RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' FERRARI Donigio

A. Bucella
GE 3610713
29-02-18

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Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a sue mone la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100391

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

08/10/21

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500822	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	01-10-2021 400F

A06 Customer: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	317812/2	100	35,00	2100,0	11500	1		6.806	58233	1PLATCS35039
932436	317812/1	100	35,00	2100,0	11500	1		6.810	58233	1PLATCS35039
932436	317813/2	100	35,00	2100,0	11500	1		6.819	58233	1PLATCS35039
932436	317813/1	100	35,00	2100,0	11500	1		6.819	58233	1PLATCS35039
932436	317814/2	100	35,00	2100,0	11500	1		6.800	58233	1PLATCS35039
		Sum				5		34.054		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436		.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
932436		.044	.056	.510

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
932436	30,0	35.80	F	O	T	461	592	A5	25.4	77.98
	30,0	35.99	F	O	T	475	592	A5	25.3	80.21

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	344	356	342	347
	CV 10x10	F	O	T	-55	379	376	376	377

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500821	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 04-10-2021 400F

A06 Customer: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	317814/1	100	35,00	2100,0	11500	1		6.800	58350	1PLATCS35039
		Sum				1		6.800		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
932436	.044	.056	.510

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
932436	30,0	35.99	F	O	T	475	592	A5	25.3	80.21

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	379	376	376	377

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100381

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **06/10/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 06-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500733	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 06-10-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1721001673 121A01C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460G2+M

B03 Standard EN 10225 : 2009

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
931038	313334/1	220	15,00	3000,0	12000	1		4.399	58536	1PLATCS15029
		Sum				1		4.399		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
931038		.029	.340	1.620	.008	.0008	.039	.165	.180	.024	.163	.005	.039	.012	.0051	.0003	.0020	.0023	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
931038		.044	.056	.532

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						460	540		17.0	
Set values <=							700			93.00
931038	30,0	15.46	F	O	T	556	632	A5	19.7	87.96

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
931038	CV 10x10	F	O	T	-55	352	368	340	353

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
931038	.032	.344	1.630	.008	.0008	.039	.167	.180	.023	.163	.006	.039	.012	.0061	.0003	.0020	.0022	.0020	.0020	.002	.37	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
931038		.045	.057	.533

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 06-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500695	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 06-10-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130	A09 Disp-No 42	reference no.
739185	318564/1	170	40,00	3000,0	12000	1		11.545	58517		1PLATCS40030
739185	318566/1	170	40,00	3000,0	12000	1		11.575	58517		1PLATCS40030
739187	318562/1	190	30,00	3000,0	12000	1		8.735	58517		1PLATCS30030
		Sum				**3**		**31.855**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.030	.325	1.620	.007	.0008	.036	.179	.170	.006	.157	.004	.040	.011	.0049	.0002	.0020	.0020	.0030	.0020	.002	.36	.14
739187	.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739185	.044	.055	.512
739187	.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						420	520		17.0	
Set values <=							680			90.00
739185	30,0	41.59	F	O	T	468	584	A5	23.6	80.10
739187	30,0	30.81	F	O	T	510	573	A5	25.7	89.04

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739185	CV 10x10	F	O	T	-55	359	370	378	369
739187	CV 10x10	F	O	T	-55	340	368	358	355

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					416	416	416	25	25	25	35
Set values <=											
739185	Ø	9.98	F	S	564	563	563	81	82	77	80
739187	Ø	10.01	F	S	563	562	563	82	81	78	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.031	.320	1.580	.007	.0007	.032	.174	.170	.005	.157	.003	.039	.011	.0055	.0002	.0020	.0021	.0020	.0020	.002	.35	.14
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>= Set values <=	.090	.110	.900
739185	.042	.053	.506
739187	.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100369

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMO Signature

Data / Date **05/10/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 02-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500453	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	04-10-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

Supplementary requirements: Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738673	317617/1	140	40,00	2500,0	12000	1		9.645	58340	1PLATCS40030
739187	313333/1	200	25,00	3000,0	12000	1		7.293	58346	1PLATCS25035
		Sum				2		16.938		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738673		.045	.344	1.610	.005	.0006	.044	.168	.170	.005	.161	.003	.036	.012	.0057	.0002	.0020	.0012	.0020	.0020	.002	.37	.16
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
738673		.039	.051	.504
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						420	520		17.0	
Set values <=							680			90.00
738673	30,0	41.15	F	O	T	488	619	A5	23.3	78.85
>=						440	530		17.0	
Set values <=							690			90.00
739187	30,0	25.75	F	O	T	523	589	A5	22.3	88.79

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>= Set values <=					-55	42	42	42	60
738673	CV 10x10	F	O	T	-55	53	354	311	239
739187	CV 10x10	F	O	T	-55	360	365	356	360

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					416	416	416	25	25	25	35
Set values <=											
738673	Ø	10.00	F	S	606	529	606	79	74	80	77
>=					424	424	424	25	25	25	35
Set values <=											
739187	Ø	10.01	F	S	563	562	563	82	81	78	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738673	.043	.342	1.650	.006	.0004	.052	.177	.180	.007	.160	.004	.038	.012	.0057	.0002	.0020	.0017	.0020	.0020	.002	.38	.16
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
738673		.042	.054	.524
739187		.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 02-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500456	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	04-10-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313332/1	210	20,00	3000,0	12000	1		5.848	58346	1PLATCS20034
739187	313336/1	70	30,00	2300,0	11800	1		6.553	58355	1PLATCS30045
739187	313337/1	70	30,00	2300,0	11800	1		6.553	58355	1PLATCS30045
739187	313341/1	70	30,00	2300,0	11800	1		6.556	58355	1PLATCS30045
739187	316434/1	20	35,00	3000,0	10000	1		8.471	58346	1PLATCS35039
		Sum				5		33.981		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	30.81	F	O	T	510	573	A5	25.7	89.04
	30,0	30.86	F	O	T	509	576	A5	25.5	88.35
	30,0	35.93	F	O	T	468	580	A5	25.5	80.69
>=						440	530		17.0	
Set values <=							690			90.00
739187	30,0	21.04	F	O	T	538	604	A5	20.0	89.03

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	365	377	371	371
	CV 10x10	F	O	T	-55	340	368	358	355
	CV 10x10	F	O	T	-55	376	354	348	359
	CV 10x10	F	O	T	-55	368	390	369	375

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
739187	.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100354

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **30/09/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 29-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500157	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	29-09-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739185	314275/1	110	25,00	2300,0	11500	1		5.347	58097	1PLATCS25043
		Sum				1		5.347		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.030	.325	1.620	.007	.0008	.036	.179	.170	.006	.157	.004	.040	.011	.0049	.0002	.0020	.0020	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739185	.044	.055	.512

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						440	530		17.0	
Set values <=							690			90.00
739185	30,0	25.42	F	O	T	530	589	A5	22.8	89.99

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739185	CV 10x10	F	O	T	-55	349	332	346	342

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.031	.320	1.580	.007	.0007	.032	.174	.170	.005	.157	.003	.039	.011	.0055	.0002	.0020	.0021	.0020	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739185		.042	.053	.506

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 30-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500242	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 30-09-2021 400F

A06 Customer: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313084/1	50	40,00	2100,0	11500	1		7.774	58158	1PLATCS40041
		Sum				1		7.774		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	C01 SpThickn mm	C01 loc.	C01 PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	40.62	F	O	T	478	583	A5	22.1	82.04

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	350	345	367	354

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739187		.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100341

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **28/09/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500008	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	28-09-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738845	317741/1	30	20,00	1700,0	12000	1		3.289	58013	1PLATCS20034
738845	317741/2	30	20,00	1700,0	12000	1		3.288	58013	1PLATCS20034
739187	313342/1	70	30,00	2300,0	11800	1		6.550	58013	1PLATCS30045
	Sum					3		13.127		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845		.033	.321	1.600	.008	.0007	.035	.173	.170	.006	.159	.004	.038	.011	.0042	.0002	.0020	.0019	.0020	.0020	.002	.36	.14
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
738845		.042	.053	.508
739187		.040	.053	.521

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						440	530		17.0	
Set values <=							690			90.00
738845	30,0	20.42	F	O	T	497	576	A5	24.3	86.35
Set values >=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	30.86	F	O	T	509	576	A5	25.5	88.35

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
738845	CV 10x10	F	O	T	-55	401	393	393	395
739187	CV 10x10	F	O	T	-55	376	354	348	359

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845	.035	.327	1.620	.008	.0006	.036	.173	.170	.005	.159	.004	.039	.012	.0042	.0002	.0020	.0017	.0020	.0020	.002	.36	.15
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
738845	.043	.055	.507
739187	.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100333

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **24/09/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 23-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0499699	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 23-09-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	313261/1	160	45,00	3000,0	12000	1		13.060	57757	1PLATCS45022
		Sum				1		13.060		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436		.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
932436		.044	.056	.510

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=					415	515		17.0	
Set values	<=						675			90.00
932436	Ø	9.99	F	V	T	433	552	A5	28.6	78.38

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	344	377	370	364
	CV 10x10	F	K	T	-55	346	359	311	339

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					412	412	412	25	25	25	35
Set values <=											
932436	Ø	9.96	F	S	558	564	560	80	82	84	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
932436		.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 23-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0499704	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 23-09-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
843443	317391/1	10	35,00	3000,0	12000	1		10.151	57770	1PLATCS35039
		Sum				**1**		**10.151**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
843443		.031	.329	1.610	.007	.0008	.039	.175	.170	.009	.158	.005	.040	.012	.0039	.0002	.0020	.0014	.0030	.0030	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
843443		.045	.057	.512

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	C01 SpThickn mm	C01 loc.	C01 PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						420	520		17.0	
Set values <=							680			90.00
843443	30,0	35.78	F	O	T	495	600	A5	24.2	82.49

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
843443	CV 10x10	F	O	T	-55	360	351	370	360

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
843443	.031	.318	1.590	.006	.0003	.034	.165	.170	.007	.156	.004	.037	.012	.0040	.0002	.0020	.0009	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
843443		.041	.053	.498

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 23-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0499709	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 23-09-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

Supplementary requirements: Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	313260/1	160	45,00	3000,0	12000	1		13.043	57777	1PLATCS45022
		Sum				**1**		**13.043**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436		.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
932436		.044	.056	.510

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						415	515		17.0	
Set values <=							675			90.00
932436	Ø	9.99	F	V	T	433	552	A5	28.6	78.38

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	344	377	370	364
	CV 10x10	F	K	T	-55	346	359	311	339

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					412	412	412	25	25	25	35
Set values <=											
932436	Ø	9.96	F	S	558	564	560	80	82	84	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100330

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **23/09/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 22-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0499637	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 22-09-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313343/1	70	30,00	2300,0	11800	1		6.556	57685	1PLATCS30045
		Sum				1		6.556		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	30.86	F	O	T	509	576	A5	25.5	88.35

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	376	354	348	359

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739187		.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 22-09-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0499634	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 22-09-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	313100/1	150	50,00	2500,0	10000	1		10.099	57681	1PLATCS50031
		Sum				1		10.099		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
932436	.044	.056	.510

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=					415	515		17.0	
Set values	<=						675			90.00
932436	Ø	9.98	F	V	T	442	558	A5	27.6	79.15

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	353	353	355	354
	CV 10x10	F	K	T	-55	365	358	370	365

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					412	412	412	25	25	25	35
Set values <=											
932436	Ø	9.96	F	S	558	564	560	80	82	84	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012102083

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **22/12/21**

Sonia Emiliani

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503919	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 17-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
843443	314278/1	180	35,00	3000,0	12000	1		10.192	61131	1PLATCS35029
		Sum				1		10.192		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
843443		.031	.329	1.610	.007	.0008	.039	.175	.170	.009	.158	.005	.040	.012	.0039	.0002	.0020	.0014	.0030	.0030	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
843443		.045	.057	.512

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width mm	C01 SpThickn mm	C01 loc.	C01 PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						420	520		17.0	
Set values <=							680			90.00
843443	30,0	35.78	F	O	T	495	600	A5	24.2	82.49

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
843443	CV 10x10	F	O	T	-55	360	351	370	360

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					416	416	416	25	25	25	35
Set values <=											
843443	Ø	9.99	F	S	568	565	565	83	84	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
Set values	>=		.150				.015																
	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
843443		.031	.318	1.590	.006	.0003	.034	.165	.170	.007	.156	.004	.037	.012	.0040	.0002	.0020	.0009	.0030	.0020	.002	.35	.14

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
843443		.041	.053	.498

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 01-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500408	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 01-10-2021 400F

A06 Customer: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

A07 OrderNo.: 1721001673 121A01C

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A06 Consignee: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313340/1	70	30,00	2300,0	11800	1		6.579	58292	1PLATCS30045
932436	317820/1	60	40,00	2100,0	10000	1		6.747	58292	1PLATCS40041
	Sum					2		13.326		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14
932436	.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739187	.040	.053	.521
932436	.044	.056	.510

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	30.86	F	O	T	509	576	A5	25.5	88.35
932436	30,0	41.22	F	O	T	474	587	A5	24.5	80.71

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	376	354	348	359
932436	CV 10x10	F	O	T	-55	365	350	373	362

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
739187	.040	.052	.511
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100495

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **17/11/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 16-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503864	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 16-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739185	314276/1	110	25,00	2300,0	11500	1		5.347	61104	1PLATCS25043
739185	314277/1	110	25,00	2300,0	11500	1		5.325	61104	1PLATCS25043
		Sum				2		10.672		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.030	.325	1.620	.007	.0008	.036	.179	.170	.006	.157	.004	.040	.011	.0049	.0002	.0020	.0020	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739185	.044	.055	.512

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						440	530		17.0	
Set values <=							690			90.00
739185	30,0	25.42	F	O	T	530	589	A5	22.8	89.99

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739185	CV 10x10	F	O	T	-55	349	332	346	342

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.031	.320	1.580	.007	.0007	.032	.174	.170	.005	.157	.003	.039	.011	.0055	.0002	.0020	.0021	.0020	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
739185	.042	.053	.506

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 17-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503948	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 17-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738845	316499/1	50	40,00	2100,0	11500	1		7.773	61178	1PLATCS40041
		Sum				1		7.773		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845		.033	.321	1.600	.008	.0007	.035	.173	.170	.006	.159	.004	.038	.011	.0042	.0002	.0020	.0019	.0020	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
738845		.042	.053	.508

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
738845	30,0	41.10	F	O	T	469	602	A5	24.6	77.88

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
Set values >=					-55	42	42	42	60
738845	CV 10x10	F	O	T	-55	386	390	394	390

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
Set values >=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845	.035	.327	1.620	.008	.0006	.036	.173	.170	.005	.159	.004	.039	.012	.0042	.0002	.0020	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
738845		.043	.055	.507

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100486

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **16/11/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 14-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503706	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 14-11-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1721001673 121A01C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

Supplementary requirements: Z35 - EN 10164

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130	A09 Disp-No 42	reference no.
740264	322717/1	130	35,00	2500,0	12000	1		8.473	60984		1PLATCS35029
740264	322718/1	130	35,00	2500,0	12000	1		8.474	60984		1PLATCS35029
		Sum				2		16.947			

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
740264		.032	.346	1.650	.006	.0005	.045	.180	.180	.008	.162	.004	.037	.014	.0040	.0002	.0020	.0017	.0020	.0020	.002	.37	.15

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
740264		.041	.055	.530

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
740264	30,0	35.88	F	O	T	508	603	A5	23.3	84.26

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
740264	CV 10x10	F	O	T	-55	337	342	350	343

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					416	416	416	25	25	25	35
Set values <=											
740264	Ø	9.99	F	S	584	584	586	82	81	73	78

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
740264	.032	.344	1.630	.006	.0006	.044	.180	.180	.009	.159	.004	.038	.014	.0032	.0003	.0020	.0015	.0030	.0020	.002	.36	.15

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
740264	.042	.056	.528

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 14-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503705	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 14-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738845	316498/1	50	40,00	2100,0	11500	1		7.775	60984	1PLATCS40041
		Sum				**1**		**7.775**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845	.033	.321	1.600	.008	.0007	.035	.173	.170	.006	.159	.004	.038	.011	.0042	.0002	.0020	.0019	.0020	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
738845	.042	.053	.508

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
738845	30,0	41.10	F	O	T	469	602	A5	24.6	77.88

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
738845	CV 10x10	F	O	T	-55	386	390	394	390

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738845	.035	.327	1.620	.008	.0006	.036	.173	.170	.005	.159	.004	.039	.012	.0042	.0002	.0020	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
738845		.043	.055	.507

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 14-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503682	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 15-11-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1721001673 121A01C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739185	314275/2	110	25,00	2300,0	11500	1		5.345	60954	1PLATCS25043
739185	314276/2	110	25,00	2300,0	11500	1		5.344	60954	1PLATCS25043
739185	314277/2	110	25,00	2300,0	11500	1		5.324	60954	1PLATCS25043
		Sum				3		16.013		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.030	.325	1.620	.007	.0008	.036	.179	.170	.006	.157	.004	.040	.011	.0049	.0002	.0020	.0020	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739185	.044	.055	.512

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						440	530		17.0	
Set values <=							690			90.00
739185	30,0	25.42	F	O	T	530	589	A5	22.8	89.99

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739185	CV 10x10	F	O	T	-55	349	332	346	342

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739185	.031	.320	1.580	.007	.0007	.032	.174	.170	.005	.157	.003	.039	.011	.0055	.0002	.0020	.0021	.0020	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>= Set values <=	.090	.110	.900
739185	.042	.053	.506

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 13-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503655	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 13-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313082/2	40	20,00	1700,0	10000	1		2.754	60950	1PLATCS20034
932436	317820/2	60	40,00	2100,0	10000	1		6.741	60950	1PLATCS40041
		Sum				2		9.495		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14
932436	.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739187	.040	.053	.521
932436	.044	.056	.510

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						440	530		17.0	
Set values <=							690			90.00
739187	30,0	20.86	F	O	T	526	616	A5	24.9	85.31
Set values >=						420	520		17.0	
Set values <=							680			90.00
932436	30,0	41.22	F	O	T	474	587	A5	24.5	80.71

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	413	420	427	420
932436	CV 10x10	F	O	T	-55	365	350	373	362

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
739187	.040	.052	.511
932436	.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 13-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503645	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 13-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460G2+M
		B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	318560/1	190	30,00	3000,0	12000	1		8.711	60932	1PLATCS30030
		Sum				**1**		**8.711**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
Set values	>=		.150				.015																
	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						420	520		17.0	
Set values <=							680			90.00
739187	30,0	30.81	F	O	T	510	573	A5	25.7	89.04

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	340	368	358	355

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					416	416	416	25	25	25	35
Set values <=											
739187	Ø	10.01	F	S	563	562	563	82	81	78	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
739187	.040	.052	.511

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

LF03: Cr+Ni+Cu+Mo

LF02: Nb+V+Ti

LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100475

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature

Data / Date

12/11/21

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 11-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503466	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 11-11-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1721001673 121A01C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
739187	313082/1	40	20,00	1700,0	10000	1		2.755	60813	1PLATCS20034
		Sum				1		2.755		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
Set values	>=		.150				.015																
	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187		.031	.327	1.620	.007	.0008	.033	.177	.170	.006	.168	.004	.036	.013	.0040	.0002	.0020	.0017	.0030	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739187		.040	.053	.521

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						440	530		17.0	
Set values <=							690			90.00
739187	30,0	20.86	F	O	T	526	616	A5	24.9	85.31

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobplech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
739187	CV 10x10	F	O	T	-55	413	420	427	420

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
739187	.031	.313	1.560	.007	.0006	.030	.172	.170	.006	.163	.003	.037	.012	.0041	.0002	.0020	.0016	.0030	.0020	.002	.35	.14

Z02
Inspection representative voestalpine
Groblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
739187		.040	.052	.511

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 11-11-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0503467	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021	Date of dispatch	11-11-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460G2+M
		B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
932436	313099/1	150	50,00	2500,0	10000	1		10.079	60813	1PLATCS50031
		Sum				1		10.079		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436		.033	.325	1.610	.008	.0007	.035	.173	.170	.007	.160	.004	.040	.012	.0043	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
932436		.044	.056	.510

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						415	515		17.0	
Set values <=							675			90.00
932436	Ø	9.98	F	V	T	442	558	A5	27.6	79.15

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
932436	CV 10x10	F	O	T	-55	353	353	355	354
	CV 10x10	F	K	T	-55	365	358	370	365

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=					412	412	412	25	25	25	35
Set values <=											
932436	Ø	9.96	F	S	558	564	560	80	82	84	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
932436	.034	.315	1.590	.008	.0007	.033	.165	.170	.006	.162	.004	.037	.012	.0032	.0003	.0030	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
932436		.041	.053	.503

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100450

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature

Data / Date

02/11/21

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 29-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0502531	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 29-10-2021 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460G2+M	B03 Standard	EN 10225 : 2009
A07 OrderNo.	1721001673 121A01C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738492	318940/1	80	45,00	2000,0	6000	1		4.357	60012	1PLATCS45030
		Sum				1		4.357		

B14 - Supplementary information

grinding-deviation for plate(s) 318940/1: Customer accepted the deviation.

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738492		.031	.341	1.610	.007	.0011	.037	.191	.180	.006	.163	.004	.038	.013	.0052	.0002	.0020	.0018	.0030	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
	>=			
Set values	<=	.090	.110	.900
738492		.042	.055	.540

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobleci
Springer Thomas

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=						415	515		17.0	
Set values <=							675			90.00
738492	Ø	10.01	F	V	T	514	597	A5	24.6	86.14

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
738492	CV 10x10	F	O	T	-55	346	284	336	322
	CV 10x10	F	K	T	-55	350	337	298	329

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738492	.032	.338	1.610	.006	.0009	.036	.183	.180	.005	.162	.004	.038	.014	.0046	.0002	.0020	.0018	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobtech
Springer Thomas

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
738492	.042	.056	.530

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Springer Thomas

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & C	1721001673	121A01C	Q012100396

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: **12/10/21**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.1

Z02 Date 08-10-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	Q0500993	A08 Order-No.:	1501367	A07 OrderDat.	29-07-2021

Date of dispatch 08-10-2021 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1721001673 121A01C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460G2+M

B03 Standard: EN 10225 : 2009

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
EPCIC WHP D33

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
738492	315516/1	90	25,00	2300,0	6000	1		2.783	58745	1PLATCS25043
738845	315522/1	120	15,00	2300,0	6000	1		1.681	58745	1PLATCS15029
		Sum				2		4.464		

B14 - Supplementary information
Flatness acc. EN 10029/11 class S
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class C

A04
Symbol of the manufacturer's work

voestalpine

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738492	.031	.341	1.610	.007	.0011	.037	.191	.180	.006	.163	.004	.038	.013	.0052	.0002	.0020	.0018	.0030	.0020	.002	.36	.15
738845	.033	.321	1.600	.008	.0007	.035	.173	.170	.006	.159	.004	.038	.011	.0042	.0002	.0020	.0019	.0020	.0020	.002	.36	.14

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
738492	.042	.055	.540
738845	.042	.053	.508

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
>=						440	530		17.0	
Set values <=							690			90.00
738492	30,0	25.60	F	O	T	545	606	A5	22.0	89.92
>=						460	540		17.0	
Set values <=							700			93.00
738845	30,0	15.64	F	O	T	551	602	A5	22.4	91.63

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=					-55	42	42	42	60
Set values <=									
738492	CV 10x10	F	O	T	-55	332	349	342	341
738845	CV 10x10	F	O	T	-55	333	346	354	344

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
738492	.032	.338	1.610	.006	.0009	.036	.183	.180	.005	.162	.004	.038	.014	.0046	.0002	.0020	.0018	.0020	.0020	.002	.36	.15
738845	.035	.327	1.620	.008	.0006	.036	.173	.170	.005	.159	.004	.039	.012	.0042	.0002	.0020	.0017	.0020	.0020	.002	.36	.15

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.		LF01 %	LF02 %	LF03 %
Set values	>=			
	<=	.090	.110	.900
738492		.042	.056	.530
738845		.043	.055	.507

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Grobblech
Kogler Franz

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1721002191	121A00B	Q012100524

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date: 09/11/21

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 6846/EXP/R/19

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2004 type 3.1
/nr normy/

(A06) **Zamawiający** T.A.L.
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/19/01349/H1901071 **OF - 190765**	**4219029/20**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/EN ISO 3183 : 2012/ A1:2018 - PSL1/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 910 °C/40'. Pipes hot finished > 850 °C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **20" x 0,812"** **(508 x 20,62 mm)** **7 - 9 m**	(B02) **6/X52/L360**	(B07) **886006**	(B08) **4**	(B15) **31,05**	(B13) **7703**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
(B07) **886006** **control anal.** **control anal.**	0,14 0,16 0,15	1,25 1,24 1,25	0,34 0,34 0,34	0,011 0,011 0,011	0,004 0,004 0,005	0,05 0,06 0,05	0,12 0,12 0,12	0,25 0,25 0,25
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
	0,034 0,032 0,033	0,04 0,04 0,04	0,05 0,05 0,05	0,003 0,003 0,003	0,000 0,000 0,000	0,009 0,010 0,010	0,40 0,42 0,41	

Approved by QUALITY1 on 24/09/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 °C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	°C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 886006/27418 L	397	550	36,8		Mixed area 194 - 240 - 228	221	164 HB 165 HB	
886006/27416	390	548	35,6					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8. (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ ISO 3183/ L360/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 11.09. 2020 r. 6846/EXP/R/19 Strona Page Page Seite Страница 2/2

Approved by QUALITY1 on 24/09/20

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 816/2021/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 210110	**H2100278/2/3** **27044**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 900 ^{0}C/20'. Pipes hot finished > 850 ^{0}C and cooled in still air. Melting proces of the steel :E. Fully killed. Yield point acc. with ASME II PART D TABL. Y1.(quarantee). Charge material of Polish origin.	(B09) **14" x 0,750"** **(355,6 x 19,05 mm)** **10 - 11,8 m**	(B02) **6/X52/L360**	(B07) **889876**	(B08) **7**	(B15) **80,60**	(B13) **12626**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **889876**	0,15	1,28	0,24	0,012	0,004	0,14	0,07	0,15
	0,15	1,30	0,24	0,011	0,005	0,15	0,07	0,15
control anal.	0,15	1,30	0,24	0,011	0,005	0,15	0,07	0,15
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
control anal.	0,034	0,04	0,05	0,000	0,001	0,010	0,42	
	0,031	0,04	0,05	0,000	0,001	0,012	0,43	
	0,031	0,04	0,05	0,000	0,001	0,012	0,43	

Approved by QUALITY1 on 24/03/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^0C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 889876/6125 L	385	532	43,7		Mixed area 158 - 158 - 154	156	167 HB 165 HB	

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - positive results (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеименованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 15.03. 2021 r.** **816/2021/AH** Strona Page Page Seite Страница **2/2**

Approved by QUALITY1 on 24/03/21

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(A03)

ŚWIADECTWO ODBIORU No 1497/EXP/R/20

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/19/01818/H2000374 **OF 200217**	**4229017/20**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/EN ISO 3183 : 2012/ A1:2018 - PSL1/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 910 ^{0}C/50'. Pipes hot finished > 850 ^{0}C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **20" x 1,031"** **(508 x 26,19 mm)** **6 - 7,5 m**	(B02) **6/X52/L360**	(B07) **886574**	(B08) **1**	(B15) **7,44**	(B13) **2305**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **886574**	**0,17** **0,19**	**1,26** **1,27**	**0,20** **0,19**	**0,009** **0,009**	**0,007** **0,006**	**0,08** **0,09**	**0,07** **0,06**	**0,18** **0,18**
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
control anal. **control anal.**	**0,035** **0,032**	**0,02** **0,02**	**0,05** **0,05**	**0,000** **0,000**	**0,001** **0,001**	**0,011** **0,012**	**0,43** **0,45**	

Approved by QUALITY1 on 27/03/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 °C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	°C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: ø½" 886574/5751 L	394	552	37,6		Mixed area 108 - 109 - 106	108	163 HB 162 HB	

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99)
Guarantee grain size acc.to ASTM E 112 min. 8.
(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ ISO 3183/ L360/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI Halina Rehmet	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 16.03. 2020 r.

1497/EXP/R/20

Approved by QUALITY1 on 27/03/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ALCHEMIA S.A.
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41-506Chorzów
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(A03)

ŚWIADECTWO ODBIORU No 2848/EXP/R/20

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/19/02112/H2000684 OF 200327	**4229415/20**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/EN ISO 3183 : 2012/ A1:2018 - PSL1/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 910 °C/50'. Pipes hot finished > 850 °C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **20" x 1,031" (508 x 26,19 mm) 6 - 7,5 m**	(B02) **6/X52/L360**	(B07) **887369**	(B08) **3**	(B15) **20,92**	(B13) **6552**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **887369** **control anal.** **control anal.**	0,15 0,16 0,17	1,25 1,25 1,27	0,23 0,23 0,23	0,010 0,010 0,010	0,005 0,007 0,004	0,12 0,12 0,12	0,11 0,11 0,11	0,19 0,19 0,19
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
	0,024 0,022 0,023	0,04 0,04 0,04	0,05 0,05 0,05	0,000 0,001 0,001	0,001 0,001 0,001	0,012 0,014 0,014	0,42 0,43 0,44	

Approved by QUALITY1 on 25/05/20

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2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 ^{0}C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^{0}C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: ø½" 887369/11500 L	426	559	33,7		Mixed area 111 - 105 - 116	111	163 HB 162 HB	
887369/11501	403	556	35,0					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ ISO 3183/ L360/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA Z ZAKRESU KONTROLI JAKOŚCI Halina Rehmet	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 25.05. 2020 r.

2848/EXP/R/20

Approved by QUALITY1 on 25/05/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 22783/1

25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210328

Contract 50005044

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
808998		Heat analysis		0.14	1.24	0.24	0.004	0.008	0.06	0.08	0.16	0.026	0.02	0.064	0.002	0.003	0.0001	0.0070
808998	21-760	Product analysis		0.14	1.25	0.24	0.004	0.009	0.06	0.09	0.15	0.026	0.02	0.065	0.002	0.003	0.0001	0.0073
808998	21-760	Product analysis		0.14	1.25	0.24	0.004	0.009	0.06	0.09	0.15	0.027	0.02	0.065	0.002	0.003	0.0001	0.0075

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
808998		Heat analysis		3.71	0.066	0.069	0.309	0.39	0.24
808998	21-760	Product analysis		3.56	0.067	0.070	0.300	0.39	0.23
808998	21-760	Product analysis		3.60	0.067	0.070	0.300	0.39	0.23

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by AAIMI on 07/09/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 22783/1

25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210328

Contract 50005044

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
808998	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-2580	403.00	-	516.00	-	37.60	0.78
808998	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-2580	401.00	-	514.00	-	37.30	0.78
808998	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-1879	396.20	-	512.10	-	33.70	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
808998	21-2468	Longitudinal	10x10x55	-50	27.0	293	279	301	40.0	291	-	-	-	100	100	100	2.16	2.10	2.19

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
808998	21-2180	-	-	-	-	-	-	-	<20
808998	21-2180	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 22783/1

25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210328

Contract 50005044

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
808998	21-641	450	254.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
808998	21-2614	OK
808998	21-2614	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
808998	21-623	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
808998	6	56.68	11537

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Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by AAIMI on 07/09/21

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4	ArcelorMittal		
						B 22783/1			
						25.08.2021			
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 11.537 tons - lbs	Total Length: 56.68 meters - feets	Pieces 6	Bundles -
	Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;								
Buyer's reference PO NO. : OF210328	Dimensions: 406.40 x 21.44 mm -		Schedule: 80			Length: 8.00 - 10.00 m -		- -	
Contract 50005044									

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360/X52/6/P355NL1TC1 -
24	-		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300089.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 30 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1721002191 TAL JOB N°321002522
N° 1 MT 9,62 HEAT 808998 DIMENSIONS 406,4 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Buyer's reference: PO NO. : OF210328

Contract 50005044

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
808998		Heat analysis		0.14	1.24	0.24	0.004	0.008	0.06	0.08	0.16	0.026	0.02	0.064	0.002	0.003	0.0001	0.0070
808998	21-760	Product analysis		0.14	1.25	0.24	0.004	0.009	0.06	0.09	0.15	0.026	0.02	0.065	0.002	0.003	0.0001	0.0073
808998	21-760	Product analysis		0.14	1.25	0.24	0.004	0.009	0.06	0.09	0.15	0.027	0.02	0.065	0.002	0.003	0.0001	0.0075

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
808998		Heat analysis		3.71	0.066	0.069	0.309	0.39	0.24
808998	21-760	Product analysis		3.56	0.067	0.070	0.300	0.39	0.23
808998	21-760	Product analysis		3.60	0.067	0.070	0.300	0.39	0.23

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 22783/1

25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210328

Contract 50005044

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
808998	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-2580	403.00	-	516.00	-	37.60	0.78
808998	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-2580	401.00	-	514.00	-	37.30	0.78
808998	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-1879	396.20	-	512.10	-	33.70	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
808998	21-2468	Longitudinal	10x10x55	-50	27.0	293	279	301	40.0	291	-	-	-	100	100	100	2.16	2.10	2.19

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
808998	21-2180	-	-	-	-	-	-	-	<20
808998	21-2180	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 22783/1

25.08.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.537 tons - lbs	56.68 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210328

Contract 50005044

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
808998	21-641	450	254.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
808998	21-2614	OK
808998	21-2614	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
808998	21-623	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
808998	6	56.68	11537

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1721002191 TAL JOB N°321002522
N° 1 MT 9,62 HEAT 808998 DIMENSIONS 406,4 x 21,44

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4	B 22783/1	25.08.2021	ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 11.537 tons - lbs	Total Length: 56.68 meters - feets	Pieces 6	Bundles -
Buyer's reference PO NO. : OF210328	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.6/03.03.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;								
Contract 50005044	Dimensions: 406.40 x 21.44 mm -		Schedule: 80			Length: 8.00 - 10.00 m -		- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360/X52/6/P355NL1TC1 -
24	-		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300089.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 30 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by AAIMI on 07/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1721002191 TAL JOB N°321002522
N° 1 MT 9,02 HEAT 809305 DIMENSIONS 406,4 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
809305		Heat analysis		0.13	1.23	0.21	0.004	0.013	0.11	0.07	0.18	0.028	0.02	0.067	0.003	0.003	0.0001	0.0058
463898		Heat analysis		0.13	1.20	0.20	0.002	0.010	0.07	0.09	0.13	0.021	0.02	0.072	0.003	0.002	0.0001	0.0100
809305	21-1002	Product analysis		0.14	1.24	0.22	0.003	0.012	0.11	0.08	0.17	0.030	0.02	0.068	0.003	0.003	0.0002	0.0057
809305	21-1002	Product analysis		0.14	1.24	0.22	0.003	0.012	0.11	0.08	0.17	0.030	0.02	0.069	0.003	0.003	0.0002	0.0055
463898	21-414	Product analysis		0.13	1.21	0.20	0.002	0.009	0.08	0.09	0.13	0.022	0.02	0.073	0.003	0.002	0.0002	0.0099
463898	21-414	Product analysis		0.14	1.21	0.20	0.002	0.010	0.08	0.09	0.13	0.022	0.02	0.073	0.003	0.002	0.0002	0.0099

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
809305		Heat analysis		4.83	0.070	0.073	0.383	0.39	0.31
463898		Heat analysis		2.10	0.075	0.077	0.297	0.38	0.22
809305	21-1002	Product analysis		5.26	0.071	0.074	0.374	0.40	0.30
809305	21-1002	Product analysis		5.45	0.072	0.075	0.375	0.40	0.30
463898	21-414	Product analysis		2.22	0.076	0.078	0.308	0.38	0.23
463898	21-414	Product analysis		2.22	0.076	0.078	0.308	0.39	0.23

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A_rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 08/11/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
809305	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	397.00	-	510.00	-	37.10	0.78
809305	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	401.00	-	511.00	-	37.40	0.78
809305	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-2484	392.40	-	505.70	-	32.10	0.78
463898	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	392.00	-	508.00	-	36.80	0.77
463898	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-2484	397.50	-	512.10	-	33.30	0.78

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
809305	21-4026	Longitudinal	10x10x55	-52	27.0	231	219	211	40.0	220	-	-	-	100	100	100	1.98	1.88	1.84
463898	21-4026	Longitudinal	10x10x55	-52	27.0	207	214	226	40.0	216	-	-	-	100	100	100	1.83	1.86	1.95

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
809305	21-2794	-	-	-	-	-	-	-	<20
809305	21-2794	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 08/11/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
809305	21-860	450	270.00	-
463898	21-860	450	267.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
809305	21-4914	OK
809305	21-4914	OK
463898	21-4914	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
809305	21-858	0	10
463898	21-858	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
809305	2	18.97	3861
463898	1	10.20	2076

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 08/11/21

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4 B 23312/1 20.10.2021	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 5.937 tons - lbs	Total Length: 29.17 meters - feets	Pieces 3 / Bundles -
Buyer's reference PO NO. : OF210485	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;							
Contract 50005186	Dimensions: 406.40 x 21.44 mm -		Schedule: 80			Length: 8.00 - 10.20 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
23	-		205	-	20.5	5	L360/X52/6/P355NL1TC1 -

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300089, G300007.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 30 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by MBRONZINI on 08/11/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-
-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
809305		Heat analysis		0.13	1.23	0.21	0.004	0.013	0.11	0.07	0.18	0.028	0.02	0.067	0.003	0.003	0.0001	0.0058
463898		Heat analysis		0.13	1.20	0.20	0.002	0.010	0.07	0.09	0.13	0.021	0.02	0.072	0.003	0.002	0.0001	0.0100
809305	21-1002	Product analysis		0.14	1.24	0.22	0.003	0.012	0.11	0.08	0.17	0.030	0.02	0.068	0.003	0.003	0.0002	0.0057
809305	21-1002	Product analysis		0.14	1.24	0.22	0.003	0.012	0.11	0.08	0.17	0.030	0.02	0.069	0.003	0.003	0.0002	0.0055
463898	21-414	Product analysis		0.13	1.21	0.20	0.002	0.009	0.08	0.09	0.13	0.022	0.02	0.073	0.003	0.002	0.0002	0.0099
463898	21-414	Product analysis		0.14	1.21	0.20	0.002	0.010	0.08	0.09	0.13	0.022	0.02	0.073	0.003	0.002	0.0002	0.0099

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
809305		Heat analysis		4.83	0.070	0.073	0.383	0.39	0.31
463898		Heat analysis		2.10	0.075	0.077	0.297	0.38	0.22
809305	21-1002	Product analysis		5.26	0.071	0.074	0.374	0.40	0.30
809305	21-1002	Product analysis		5.45	0.072	0.075	0.375	0.40	0.30
463898	21-414	Product analysis		2.22	0.076	0.078	0.308	0.38	0.23
463898	21-414	Product analysis		2.22	0.076	0.078	0.308	0.39	0.23

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by MBRONZINI on 08/11/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
809305	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	397.00	-	510.00	-	37.10	0.78
809305	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	401.00	-	511.00	-	37.40	0.78
809305	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-2484	392.40	-	505.70	-	32.10	0.78
463898	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	21-3278	392.00	-	508.00	-	36.80	0.77
463898	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	21-2484	397.50	-	512.10	-	33.30	0.78

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
809305	21-4026	Longitudinal	10x10x55	-52	27.0	231	219	211	40.0	220	-	-	-	100	100	100	1.98	1.88	1.84
463898	21-4026	Longitudinal	10x10x55	-52	27.0	207	214	226	40.0	216	-	-	-	100	100	100	1.83	1.86	1.95

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
809305	21-2794	-	-	-	-	-	-	-	<20
809305	21-2794	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 08/11/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23312/1

20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Buyer's reference: PO NO. : OF210485

Contract 50005186

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
809305	21-860	450	270.00	-
463898	21-860	450	267.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
809305	21-4914	OK
809305	21-4914	OK
463898	21-4914	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
809305	21-858	0	10
463898	21-858	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
809305	2	18.97	3861
463898	1	10.20	2076

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A. rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 08/11/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

Page 4/4
B 23312/1
20.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.937 tons - lbs	29.17 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210485

Contract 50005186

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.20 m
-

-
-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300089, G300007.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 30 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by MBRONZINI on 08/11/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 2708/2021/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF210264	**H2100696/43/1** **35352,35354**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API 5L. Outside surface lacquered. Normalized 910 ^{0}C/20'. Pipes hot finished > 850 ^{0}C and cooled in still air. Melting proces of the steel :E. Fully killed. Yield point acc. with ASME II PART D TABL. Y1.(quarantee). Material free of mercury and radioactive contamination. Charge material of Polish origin.	(B09) **16" x 0,656"** **(406,4 x 16,66 mm)** **9,5 - 11,8 m**	(B02) **6/X52/L360**	(B07) **890176**	(B08) **2**	(B15) **23,21**	(B13) **3688**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **890176**	0,14 0,16 0,16	1,27 1,27 1,27	0,23 0,23 0,23	0,008 0,010 0,009	0,004 0,005 0,004	0,14 0,13 0,14	0,07 0,07 0,07	0,13 0,14 0,14
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
control anal. **control anal.**	0,035 0,031 0,032	0,04 0,04 0,04	0,05 0,05 0,05	0,001 0,001 0,001	0,001 0,001 0,001	0,009 0,011 0,011	0,41 0,43 0,43	

Approved by AAIMI on 27/09/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 30,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-52°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^0C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 890176/14950 L	373	546	43,7		164 - 172 - 154	163	161 HB 159 HB	
890176/14951	386	529	44,6					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - positive results (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

14950,14951

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestactigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA **z zakresu Kontroli Jakości** *Daria Bezla*	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego *Barbara Czyż*	**dn. 10.08. 2021 r.**

2708p/2021/AH

Approved by AAIMI on 27/09/21

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 4456/2021/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF210458	**H2101024/1/1** **42366, 42367**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/ ASTM A333/A333M/18/ A999/ A999M/19/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API 5L. Outside surface lacquered. Normalized 910 ^{0}C/45'. Pipes hot finished > 850 ^{0}C and cooled in still air. Melting proces of the steel :E. Fully killed. Yield point acc. with ASME II PART D TABL. Y1.(quarantee). Material free of mercury and radioactive contamination. Charge material of Polish origin.	(B09) **20" x 0,812"** **(508 x 20,62 mm)** **6,5 - 9,5 m**	(B02) **6/X52/L360**	(B07) **891685**	(B08) **5**	(B15) **43,88**	(B13) **11019**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **891685** **control anal.** **control anal.**	0,15 0,17 0,17	1,27 1,26 1,27	0,20 0,20 0,20	0,014 0,015 0,015	0,005 0,005 0,005	0,06 0,05 0,05	0,09 0,09 0,09	0,18 0,18 0,18
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
	0,031 0,029 0,028	0,04 0,04 0,04	0,05 0,05 0,05	0,000 0,000 0,000	0,001 0,001 0,001	0,010 0,011 0,011	0,41 0,42 0,43	

Approved by AAIMI on 01/10/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 30,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-52°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^0C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 891685/24267 L	391	540	35,6		160 - 157 - 155	157	143 HB 144 HB	
891685/24268	371	537	356					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - positive results (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestactigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 14.09. 2021 r. 4456/2021/AH Strona Page Page Seite Страница 2/2

KJ 21/637

Approved by AAIMI on 01/10/21

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA	1721002191	121A00B	Q012102133

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: 19/01/22

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 816/2021/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 210110	**H2100278/2/3** **27044**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Piéces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 900 °C/20'. Pipes hot finished > 850 °C and cooled in still air. Melting proces of the steel :E. Fully killed. Yield point acc. with ASME II PART D TABL. Y1.(quarantee). Charge material of Polish origin.	(B09) **14" x 0,750"** **(355,6 x 19,05 mm)** **10 - 11,8 m**	(B02) **6/X52/L360**	(B07) **889876**	(B08) **7**	(B15) **80,60**	(B13) **12626**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **889876** **control anal.** **control anal.**	0,15 0,15 0,15	1,28 1,30 1,30	0,24 0,24 0,24	0,012 0,011 0,011	0,004 0,005 0,005	0,14 0,15 0,15	0,07 0,07 0,07	0,15 0,15 0,15
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
	0,034 0,031 0,031	0,04 0,04 0,04	0,05 0,05 0,05	0,000 0,000 0,000	0,001 0,001 0,001	0,010 0,012 0,012	0,42 0,43 0,43	

Approved by QUALITY1 on 24/03/21

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^0C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 889876/6125 L	385	532	43,7		Mixed area 158 - 158 - 154	156	167 HB 165 HB	

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - positive results (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spelnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 15.03. 2021 r.** 816/2021/AH Strona Page Page Seite Страница 2/2

Approved by QUALITY1 on 24/03/21

ROSETTI MARINO S.P.A. P.O. 1721002191 TAL JOB N°321002522
N° 4 MT 43,79 HEAT 57358 DIMENSIONS 355,6 x 15,88

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

Page 1/4
B 23846/1
30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540
Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
41955K		Heat analysis		0.17	1.25	0.22	0.002	0.011	0.04	0.04	0.10	0.035	0.01	0.063	0.001	0.002	0.0001	0.0061
57358		Heat analysis		0.14	1.23	0.21	0.002	0.013	0.07	0.07	0.20	0.028	0.01	0.062	0.001	0.001	0.0004	0.0065
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0062
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.001	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.002	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0063

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
41955K		Heat analysis		5.74	0.064	0.066	0.216	0.41	0.15
57358		Heat analysis		4.31	0.063	0.064	0.344	0.39	0.28
41955K	21-1344	Product analysis		5.81	0.065	0.067	0.217	0.40	0.15
41955K	21-1344	Product analysis		5.54	0.065	0.067	0.217	0.40	0.15
57358	21-1278	Product analysis		3.85	0.063	0.064	0.354	0.40	0.29
57358	21-1278	Product analysis		3.97	0.063	0.064	0.354	0.40	0.29

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 11/01/22

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 23846/1
30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540
Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
41955K	Longitudinal Flat	50.8	-	40.00	-	16.60	-	664.0	-	21-3755	421.00	-	530.00	-	42.40	0.79
41955K	Longitudinal Flat	-	-	20.00	-	16.40	-	328.0	-	21-2922	417.10	-	528.00	-	37.80	0.79
57358	Longitudinal Flat	50.8	-	40.00	-	17.50	-	700.0	-	21-3755	424.00	-	532.00	-	42.10	0.80
57358	Longitudinal Flat	50.8	-	40.00	-	16.80	-	672.0	-	21-3755	419.00	-	527.00	-	41.90	0.80
57358	Longitudinal Flat	-	-	20.00	-	17.10	-	342.0	-	21-2922	421.10	-	532.20	-	38.80	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
41955K	21-4767	Longitudinal	10x10x55	-52	27.0	211	203	221	40.0	212	-	-	-	100	100	100	1.88	1.82	1.94
57358	21-4767	Longitudinal	10x10x55	-52	27.0	186	206	214	40.0	202	-	-	-	95	100	100	1.66	1.84	1.91

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
41955K	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 11/01/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 23846/1
30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540
Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
41955K	21-1037	450	271.00	-
57358	21-1037	450	266.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
41955K	21-5908	OK
57358	21-5908	OK
57358	21-5908	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
41955K	21-979	0	9
57358	21-979	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
41955K	1	11.57	1539
57358	6	66.43	8838

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4	B 23846/1	30.11.2021
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 10.377 tons - lbs	Total Length: 78.00 meters - feets	Pieces 7 / Bundles -
Buyer's reference PO NO. : OF210540	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;							
Contract 50005230	Dimensions: 355.60 x 15.88 mm -	Schedule: -				Length: 10.00 - 11.80 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
15	-		205	-	20.5	5	L360/X52/6/P355NL1TC1 -

Remarks

PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300047, G001595.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 17 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

ROSETTI MARINO S.P.A. P.O. 1721002191 TAL JOB N°321002522
N° 1 MT 11,57 HEAT 41955K DIMENSIONS 355,6 x 15,88

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
41955K		Heat analysis		0.17	1.25	0.22	0.002	0.011	0.04	0.04	0.10	0.035	0.01	0.063	0.001	0.002	0.0001	0.0061
57358		Heat analysis		0.14	1.23	0.21	0.002	0.013	0.07	0.07	0.20	0.028	0.01	0.062	0.001	0.001	0.0004	0.0065
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0062
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.001	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.002	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0063

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
41955K		Heat analysis		5.74	0.064	0.066	0.216	0.41	0.15
57358		Heat analysis		4.31	0.063	0.064	0.344	0.39	0.28
41955K	21-1344	Product analysis		5.81	0.065	0.067	0.217	0.40	0.15
41955K	21-1344	Product analysis		5.54	0.065	0.067	0.217	0.40	0.15
57358	21-1278	Product analysis		3.85	0.063	0.064	0.354	0.40	0.29
57358	21-1278	Product analysis		3.97	0.063	0.064	0.354	0.40	0.29

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 11/01/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
41955K	Longitudinal Flat	50.8	-	40.00	-	16.60	-	664.0	-	21-3755	421.00	-	530.00	-	42.40	0.79
41955K	Longitudinal Flat	-	-	20.00	-	16.40	-	328.0	-	21-2922	417.10	-	528.00	-	37.80	0.79
57358	Longitudinal Flat	50.8	-	40.00	-	17.50	-	700.0	-	21-3755	424.00	-	532.00	-	42.10	0.80
57358	Longitudinal Flat	50.8	-	40.00	-	16.80	-	672.0	-	21-3755	419.00	-	527.00	-	41.90	0.80
57358	Longitudinal Flat	-	-	20.00	-	17.10	-	342.0	-	21-2922	421.10	-	532.20	-	38.80	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
41955K	21-4767	Longitudinal	10x10x55	-52	27.0	211	203	221	40.0	212	-	-	-	100	100	100	1.88	1.82	1.94
57358	21-4767	Longitudinal	10x10x55	-52	27.0	186	206	214	40.0	202	-	-	-	95	100	100	1.66	1.84	1.91

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
41955K	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
41955K	21-1037	450	271.00	-
57358	21-1037	450	266.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
41955K	21-5908	OK
57358	21-5908	OK
57358	21-5908	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
41955K	21-979	0	9
57358	21-979	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
41955K	1	11.57	1539
57358	6	66.43	8838

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

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B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300047, G001595.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 17 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 11/01/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA	1721002191	121A00B	Q012102099

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani 11/01/22

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ROSETTI MARINO S.P.A. P.O. 1721002191 TAL JOB N°321002522
N° 2 MT 22,64 HEAT 57358 DIMENSIONS 355,6 x 15,88

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
41955K		Heat analysis		0.17	1.25	0.22	0.002	0.011	0.04	0.04	0.10	0.035	0.01	0.063	0.001	0.002	0.0001	0.0061
57358		Heat analysis		0.14	1.23	0.21	0.002	0.013	0.07	0.07	0.20	0.028	0.01	0.062	0.001	0.001	0.0004	0.0065
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0062
41955K	21-1344	Product analysis		0.16	1.25	0.21	0.001	0.011	0.04	0.04	0.10	0.036	0.01	0.064	0.001	0.002	0.0002	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.001	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0065
57358	21-1278	Product analysis		0.15	1.23	0.21	0.002	0.012	0.08	0.08	0.20	0.025	0.01	0.062	0.001	0.001	0.0003	0.0063

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
41955K		Heat analysis		5.74	0.064	0.066	0.216	0.41	0.15
57358		Heat analysis		4.31	0.063	0.064	0.344	0.39	0.28
41955K	21-1344	Product analysis		5.81	0.065	0.067	0.217	0.40	0.15
41955K	21-1344	Product analysis		5.54	0.065	0.067	0.217	0.40	0.15
57358	21-1278	Product analysis		3.85	0.063	0.064	0.354	0.40	0.29
57358	21-1278	Product analysis		3.97	0.063	0.064	0.354	0.40	0.29

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 23846/1
30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540
Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
41955K	Longitudinal Flat	50.8	-	40.00	-	16.60	-	664.0	-	21-3755	421.00	-	530.00	-	42.40	0.79
41955K	Longitudinal Flat	-	-	20.00	-	16.40	-	328.0	-	21-2922	417.10	-	528.00	-	37.80	0.79
57358	Longitudinal Flat	50.8	-	40.00	-	17.50	-	700.0	-	21-3755	424.00	-	532.00	-	42.10	0.80
57358	Longitudinal Flat	50.8	-	40.00	-	16.80	-	672.0	-	21-3755	419.00	-	527.00	-	41.90	0.80
57358	Longitudinal Flat	-	-	20.00	-	17.10	-	342.0	-	21-2922	421.10	-	532.20	-	38.80	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
41955K	21-4767	Longitudinal	10x10x55	-52	27.0	211	203	221	40.0	212	-	-	-	100	100	100	1.88	1.82	1.94
57358	21-4767	Longitudinal	10x10x55	-52	27.0	186	206	214	40.0	202	-	-	-	95	100	100	1.66	1.84	1.91

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
41955K	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20
57358	21-3276	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23846/1

30.11.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
10.377 tons - lbs	78.00 meters - feets	7	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210540

Contract 50005230

Dimensions: 355.60 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
15	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
41955K	21-1037	450	271.00	-
57358	21-1037	450	266.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
41955K	21-5908	OK
57358	21-5908	OK
57358	21-5908	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
41955K	21-979	0	9
57358	21-979	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
41955K	1	11.57	1539
57358	6	66.43	8838

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 11/01/22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4	B 23846/1	30.11.2021	ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 10.377 tons - lbs	Total Length: 78.00 meters - feets	Pieces 7	Bundles -
Buyer's reference PO NO. : OF210540	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;								
Contract 50005230	Dimensions: 355.60 x 15.88 mm -		Schedule: -			Length: 10.00 - 11.80 m -		- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360/X52/6/P355NL1TC1 -
15	-		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300047, G001595.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 17 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 11/01/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 6846/EXP/R/19

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
PL/ABR/19/01349/H1901071 **OF - 190765**	**4219029/20**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/EN ISO 3183 : 2012/ A1:2018 - PSL1/ ASTM A333/A333M/18/ A999/ A999M/18/ ASME SA 333/ SA999/ SEC.II.PART.A/19. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API - 5L . Outside surface lacquered. Normalized 910 °C/40'. Pipes hot finished > 850 °C and cooled in still air. Melting proces of the steel :E. Fully killed. Charge material of Polish origin.	(B09) **20" x 0,812"** **(508 x 20,62 mm)** **7 - 9 m**	(B02) **6/X52/L360**	(B07) **886006**	(B08) **4**	(B15) **31,05**	(B13) **7703**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **886006**	0,14 0,16	1,25 1,24	0,34 0,34	0,011 0,011	0,004 0,004	0,05 0,06	0,12 0,12	0,25 0,25
control anal.	0,15	1,25	0,34	0,011	0,005	0,05	0,12	0,25
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
control anal.	0,034 0,032	0,04 0,04	0,05 0,05	0,003 0,003	0,000 0,000	0,009 0,010	0,40 0,42	
	0,033	0,04	0,05	0,003	0,000	0,010	0,41	

Approved by QUALITY1 on 24/09/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM E23 KV(10x10mm) (L) min 27J/-50 ^{0}C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB (C30)	^{0}C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 886006/27418 L	397	550	36,8		Mixed area 194 - 240 - 228	221	164 HB 165 HB	
886006/27416	390	548	35,6					

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99)
Guarantee grain size acc.to ASTM E 112 min. 8.
(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ ISO 3183/ L360/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 11.09. 2020 r.

6846/EXP/R/19

Approved by QUALITY1 on 24/09/20

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 5920/2021/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A06) **Zamawiający** **T.A.L.**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF210660	**H2101379/1/1** **48415**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1/18/ ASTM A333/A333M/18/ A999/ A999M/19/ ASME SA 333/ SA999/ SEC.II.PART.A/21. Outside diameter tolerances +/- 0,75 % . Bevelled ends acc. to API 5L. Outside surface lacquered. Normalized 910 ^{0}C/20'. Pipes hot finished > 850 ^{0}C and cooled in still air. Melting proces of the steel :E. Fully killed. Yield point acc. with ASME II PART D TABL. Y1.(quarantee). Material free of mercury and radioactive contamination. Charge material of Polish origin.	(B09) **14" x 0,625"** **(355,6 x 15,88 mm)** **10 - 11,8 m**	(B02) **6/X52/L360**	(B07) **892513**	(B08) **1**	(B15) **11,53**	(B13) **1547**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
(B07) **892513**	**0,15** **0,17**	**1,27** **1,27**	**0,21** **0,22**	**0,011** **0,011**	**0,004** **0,004**	**0,12** **0,12**	**0,09** **0,09**	**0,19** **0,19**
	Al	**Mo**	**V**	**Ti**	**Nb**	**N**	**Ceq**	
control anal. **control anal.**	**0,034** **0,031**	**0,04** **0,04**	**0,05** **0,05**	**0,000** **0,000**	**0,001** **0,001**	**0,010** **0,011**	**0,42** **0,44**	

Approved by AAIMI on 14/12/21

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	**$Rt_{0,5}$** **MPa min 360**	**Rm** **MPa min 460**	**A 2"** **% min 30,0**	**Z** **%**	**Badanie udarności** Impact Impact test Kerbschlagprobe Испытание на удар **acc. to ASTM E23 KV(10x10mm) (L) min 27J/-52°C** (C40,C41,C02)		**Twardość** Dureté Hardness Härte Твердость **acc.to NACE MR 0175/ISO 15156-2/15 AN.A.P. 2.1.2 and NACE MR 0103/ISO 17945/15 P.13.1 MAX 22 HRC/ 237 HB** (C30)	**^0C** **MPa min**
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C15)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 892513/31677 L	**399**	**538**	**45,6**		**176 - 142 - 94**	**137**	**149 HB 149 HB**	

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - positive results (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results

Each pipes has been hydrostatically tested by pressure 20,5 MPa - positive results - time 5 s

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/19R1 and Certificate No 07/202/9120/WZ/0888/19/R1 and ISO 9001/TUV Certificat No 04-100 950250-001.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spelnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5L / X52/ PSL 1 /Monogram API5L/ PSL1/A333/A999/ SA333 /SA999/ 6.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
SPECJALISTA z zakresu Kontroli Jakości Daria Bezla	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 03.12. 2021 r.** 5920/2021/AH Strona Page Page Seite Страница **2/2**

Approved by AAIMI on 14/12/21

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr	job	Barcode
ANCOFERWALDRAM STEELPLATES BV	1721002275	121A01C	Q012100516

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature

Data / Date

12/11/21

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

AncoferWaldram Steelplates bv
Damweg 12, 4905 BS Oosterhout, Nederland
Postbus 190, 4900 AD Oosterhout, Nederland
Tel.: +31 (0) 162 491500
Fax.: +31 (0) 162 423733
E-mail: qc@aws.dillinger.biz
Internet: www.ancoferwaldram.com

ANCOFER Stahlhandel GmbH
Postfach 14 03 80
45443 Mülheim an der Ruhr
DE

Your ordernumber : Rosetti 1721002275
Your reference : Frau S. Pavlovic
Our ordernumber : 3243508
Our reference : Remco van Loon

Certificates of Materials

Dear Sirs,

Enclosed you will find the certificates with regard to the material supplied by us:

Pos.	Pcs.	Quality- dimensions	Heat no.	Test no.	Arch. no.
000010	1	S355G10+M nach EN 10225 / NORSOK MDS Y20 Toleranzen nach EN 10029 Klasse B und Tabelle 5 Oberflächebeschaffenheit nach EN 10163-2 Zeugnis nach EN 10204 / 3.2 Plate - 010x2500x12000mm	486861	1342502	66725
000010	1	Plate - 010x2500x12000mm	486861	1338601	66725
000020	1	Plate - 012x2500x12000mm	492648	50723901	468621-002
000020	1	Plate - 012x2500x12000mm	492648	50723902	468621-002

Date: 03-11-2021

We wish you a good receipt, yours faithfully,



537/ 3402

QM-System: Certification as per ISO 9001

66725 **DILLINGER**

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013

A10 Advice of dispatch No./ Date of dispatch: 725778-13.01.21

A08/ Manufacturer's order/ A03 Certificate No.: 462398-006 Sheet: 1/...

A05 Established Inspecting body: VLC MSAV

A06 Purchaser: ANCOFERWALDRAM, OOSTE A07.1 No. 3078271

Final receiver: ANCOFERWALDRAM, OOSTE A07.2 No.

B01 Product: HEAVY PLATES

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements: EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width MM	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	A09 Purchaser article number
04	1	10,00	x 2500	x 12000	2400	TM	486861	13360-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13360-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13380-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13380-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13381-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13382-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13382-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13384-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13384-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13386-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13425-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13425-02	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13426-01	
04	1	10,00	x 2500	x 12000	2400	TM	486861	13426-02	
**	14				33600				
***	14				33600				

B06 Marking of the product

ITEM NO.: 02,04

STEEL DESIGNATION **S355G7G8G9G10MS355ML OS355MLVLF36E36TM**

HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1422RG2-3
Multiple Cert with S355G7+M...
VL-E36TM, VL-F36TM, S355ML...

for **DNV GL**

This document has been digitally signed and will therefore not have handwritten signatures.

Rübner, Matthias
Inspector

B. BALDAUF
Test House Manager

A H B
Inspector's stamp

A01 **AG der Dillinger Hüttenwerke**
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 14.01.21 EDI ML 1

538/ 3402

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013

A10 Advice of dispatch No./ Date of dispatch: 725778-13.01.21

A08/ Manufacturer's order/ A03 Certificate No.: 462398-006 Sheet: 2/...

A05 Established Inspecting body: VLC MSAV

A06 Purchaser: ANCOFERWALDRAM, OOSTE A07.1 No. 3078271

Final receiver: ANCOFERWALDRAM, OOSTE A07.2 No.

B01 Product: HEAVY PLATES

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements: EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

B07-B99 Further information about the product

ITEM NO.: 02,04

THICKNESS REDUCTION RATIO >= 4,00 IS FULFILLED

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10	C11 MPA RP02	C12 RM	C13 A % L0=5D	C14-C15 RP02/RM
04	486861	13384		K4	Q	RT		431	518	34	0,83
04	486861	13385 *		K4	Q	RT		417	512	37	0,81

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.C	C30 Method of test	C35	C31 Individual values			C32 Mean value
02	486861	13429 *		K4	O	RT	HBW 5/750	HB	165	168	164	166
04	486861	13384		K4	O	RT	HBW 10/3000	HB	155	154	156	155

C30-C39 Further information about hardness test

ITEM NO.: 02,04

HARDNESS TEST FOR INFORMATION ONLY

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
02	486861	13429 *		K4	QO	-40	7,5	CHP-V		750	AV 2	196	147	132	158
04	486861	13360		K4	LO	-60		CHP-V		750	AV 2	197	160	246	201
04	486861	13380		K4	LO	-60		CHP-V		750	AV 2	254	265	212	244
04	486861	13381		K4	LO	-60		CHP-V		750	AV 2	268	235	270	258
04	486861	13382		K4	LO	-60		CHP-V		750	AV 2	209	259	255	241

A04 DH Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1422RG2-3
Multiple Cert with S355G7+M...
VL-E36TM, VL-F36TM, S355ML...

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Rübner, Matthias
Inspector

B. BALDAUF
Test House Manager

AHB Inspector's stamp

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 14.01.21 EDI ML 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013	725778-13.01.21	462398-006	3/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
VLC MSAV	ANCOFERWALDRAM, OOSTE	3078271		HEAVY PLATES
	Final receiver	ANCOFERWALDRAM, OOSTE	A07.2 No.	

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
04	486861	13384		K4	QO	-40	7,5	CHP-V		750	AV 2	135	179	146	153
				K4	LO	-50	7,5	CHP-V		750	AV 2	158	191	211	187
				K4	LO	-60		CHP-V		750	AV 2	220	282	252	251
04	486861	13386		K4	LO	-60		CHP-V		750	AV 2	234	207	202	214
04	486861	13425		K4	LO	-60		CHP-V		750	AV 2	257	255	341	284
04	486861	13426		K4	QO	-40	7,5	CHP-V		750	AV 2	188	144	149	160
				K4	LO	-50	7,5	CHP-V		750	AV 2	220	235	224	226
				K4	LO	-60		CHP-V		750	AV 2	267	253	290	270

C66-C68 Supplementary tests on test samples

ITEM NO.: 02,04

DEEP ETCH TESTING AS PER DH-STANDARD <= 2B: SATISFACTORY.

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
486861	Y	0,083	0,390	1,539	0,014	0,0008	0,0071	0,018	0,005	0,020	0,033	0,001	0,020	0,0016	0,0004

B07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
486861	Y	0,002	0,0000	0,0002	0,0000	0,0017	0,0001	0,041

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat										
486861	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	6

A04 Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1422RG2-3
Multiple Cert with S355G7+M...
VL-E36TM, VL-F36TM, S355ML...

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Rübner, Matthias
Inspector

B. BALDAUF
Test House Manager

Inspector's stamp

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 14.01.21 EDI ML 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013	725778-13.01.21	462398-006	4/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
VLC MSAV	ANCOFERWALDRAM,OOSTE		3078271	HEAVY PLATES
	Final receiver	ANCOFERWALDRAM,OOSTE	A07.2 No.	

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

C95 Ladle treatment

ITEM NO.: 02,04

HEAT OF THE INDICATED ITEM: VACUUM DEGASSED

C95 Further information about ladle treatment

ITEM NO.: 02,04

FULLY KILLED AND FINE GRAIN TREATED.

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
486861	13384	K4	0,074	0,387	1,52	0,013	0,0008	0,0066	0,017	0,004	0,021	0,034	0,000	0,019	0,002	0,0002
486861	13385	K4	0,072	0,388	1,53	0,013	0,0008	0,0065	0,017	0,004	0,021	0,033	0,000	0,020	0,002	0,0002

B07.2 Heat	B07.1 Test No.	C01	AL-T
486861	13384	K4	0,040
486861	13385	K4	0,040

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01											
486861	13384	K4	FO-02=	0,34	FO-31=	0,17	FO-51=	0,02	FO-52=	0,02	FO-A1=	6
486861	13385	K4	FO-02=	0,34	FO-31=	0,17	FO-51=	0,02	FO-52=	0,02	FO-A1=	6

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-31 = C+SI/30+(MN+CR+CU)/20+MO/15+V/10+NI/60+5B
FO-51 = V +NB
FO-52 = V +NB+TI
FO-A1 = AT/N

A04 DH Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1422RG2-3
Multiple Cert with S355G7+M...
VL-E36TM, VL-F36TM, S355ML...

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Rübner, Matthias
Inspector

B. BALDAUF
Test House Manager

AHB Inspector's stamp

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 14.01.21 EDI ML 1

QM-System: Certification as per ISO 9001

DILLINGER

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A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013	725778-13.01.21	462398-006	5

A05 Established Inspecting body	A06 Purchaser	A07.1 No.	B01 Product
VLC MSAV	ANCOFERWALDRAM,OOSTE	3078271	HEAVY PLATES
	Final receiver ANCOFERWALDRAM,OOSTE	A07.2 No.	

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 02,04

EXAMINATION OF MARKING, SURFACE, SHAPE AND DIMENSIONS: THE RESULTS MEET THE REQUIREMENTS.

SURFACE	AS PER EN-10163-2 CLASS B SUBCLASS 3
THICKNESS	AS PER EN-10029:10-C
LENGTH AND WIDTH	AS PER EN-10029:10
FLATNESS	AS PER EN-10029:10-T5L

D02 Non-destructive tests - Ultrasonic testing

ITEM NO.: 02,04

UT-SPECIFICATION	: EN-10160 CLASS S2 AND E3
SCANNING PLAN BODY	: LONGITUDINALLY SCAN LINES SPACING 50 MM
EDGES	: 100 MM
PERSONNEL QUALIFICATION	: LEVEL 2 IN ACCORDANCE TO ISO 9712

THE TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

Z01-Z99 Confirmations

ITEM NO.: 02,04

THE DNV GL CERTIFICATION INVOLVEMENT WITHIN THIS CERTIFICATE/INSPECTION REPORT IS LIMITED TO THE REQUIREMENTS OF THE APPLICABLE DNV GL RULES AND STANDARDS FOR CLASSIFICATION.
THE CERTIFIED VL MATERIAL GRADES ARE ALSO FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS TO CORRESPONDING NV AND GL GRADES.

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1422RG2-3
Multiple Cert with S355G7+M...
VL-E36TM, VL-F36TM, S355ML...

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Rübner, Matthias
Inspector

B. BALDAUF
Test House Manager

Inspector's stamp

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 14.01.21 EDI ML 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013		A10 Advice of dispatch No./ Date of dispatch 2379823-19.07.21	A08/ Manufacturer's order/ A03 Certificate No. 468621-002 Sheet 1/...
A05 Established Inspecting body VLC MSAV	A06 Purchaser ANCOFERWALDRAM,OOSTE A07.1 No. 3080787 Final receiver ANCOFERWALDRAM,OOSTE A07.2 No.		B01 Product HEAVY PLATES
B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2) B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7			

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	A09 Purchaser article number
			MM		KG				
01	1	10,00	x 2055	x 12000	1973	TM	492647	501308-01	
01	1	10,00	x 2055	x 12000	1973	TM	492647	501308-02	
01	1	10,00	x 2055	x 12000	1973	TM	492647	501314-02	
01	1	10,00	x 2055	x 12000	1973	TM	492648	501360-01	
01	1	10,00	x 2055	x 12000	1973	TM	492648	501360-02	
**	5				9865				
02	1	10,00	x 3050	x 12000	2928	TM	492648	510026-01	
02	1	10,00	x 3050	x 12000	2928	TM	492648	510026-02	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516245-01	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516245-02	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516246-01	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516246-02	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516247-01	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516247-02	
02	1	10,00	x 3050	x 12000	2928	TM	492648	516248-01	
**	9				26352				
03	1	12,00	x 2055	x 12000	2367	TM	492647	501485-01	
03	1	12,00	x 2055	x 12000	2367	TM	492647	501485-02	
**	2				4734				
04	1	12,00	x 2500	x 12000	2880	TM	492648	507235-01	
04	1	12,00	x 2500	x 12000	2880	TM	492648	507235-02	
04	1	12,00	x 2500	x 12000	2880	TM	492648	507236-01	
04	1	12,00	x 2500	x 12000	2880	TM	492648	507236-02	

A04 D F Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1426AA3-02 Multiple Grades with VL-E36TM and VL- F36TM - Rev 01

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Swal, Fabrice
Inspector

POISSONNET
Test House Manager

A01
Dillinger France
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 21.07.21 EDI AC 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013	2379823-19.07.21	468621-002	2/...

A05 Established Inspecting body	A06 Purchaser	A07.1 No.	B01 Product
VLC MSAV	ANCOFERWALDRAM,OOSTE	3080787	HEAVY PLATES
	Final receiver ANCOFERWALDRAM,OOSTE	A07.2 No.	

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	A09 Purchaser article number
			MM		KG				
04	1	12,00	x 2500	x 12000	2880	TM	492648	507238-02	
04	1	12,00	x 2500	x 12000	2880	TM	492648	507239-01	
04	1	12,00	x 2500	x 12000	2880	TM	492648	507239-02	
**	7				20160				
***	23				61111				

B06 Marking of the product

ITEM NO.: 01-04

STEEL DESIGNATION **S355G7G8G9G10MS355ML OS355MLVLF36E36TM**

HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

B07-B99 Further information about the product

ITEM NO.: 01-04

THICKNESS REDUCTION RATIO >= 4,00 IS FULFILLED

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 RM	C12	C13 A % L0=5D	C14-C15 RP02/RM
01	492647	501311*		K7	Q	RT	514	564		30	0,91
01	492648	501360		K7	Q	RT	484	551		30	0,88
03	492647	501293*		K7	Q	RT	504	557		28	0,90
04	492648	507239		K7	Q	RT	496	546		30	0,91

A04 D F Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1426AA3-02 Multiple Grades with VL-E36TM and VL- F36TM - Rev 01

for DNV GL

This document has been digitally signed and will therefore not have handwritten signatures.

Swal, Fabrice
Inspector

POISSONNET
Test House Manager

A01

Dillinger France
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 21.07.21 EDI AC 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013

A10 Advice of dispatch No./ Date of dispatch: 2379823-19.07.21

A08/ Manufacturer's order/ A03 Certificate No.: 468621-002 Sheet: 3/...

A05 Established Inspecting body: VLC MSAV

A06 Purchaser: ANCOFERWALDRAM, OOSTE A07.1 No. 3080787

Final receiver: ANCOFERWALDRAM, OOSTE A07.2 No.

B01 Product: HEAVY PLATES

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements: EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.C	C30 Method of test	C35	C31 Individual values			C32 Mean value
01	492647	501311 *		K7	QO	RT	HBW 5/750	HB	177	176	176	176
01	492648	501360		K7	QO	RT	HBW 5/750	HB	174	175	174	174
03	492647	501293 *		K7	QO	RT	HBW 5/750	HB	173	174	173	173
04	492648	507239		K7	QO	RT	HBW 5/750	HB	171	169	170	170

C30-C39 Further information about hardness test

ITEM NO.: 01-04

HARDNESS TEST INFORMATIVE

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
01	492647	501308		K7	LO	-60	7,5	CHP-V		750	AV 2	161	224	216	200
01	492647	501311 *		K7	QO	-40	7,5	CHP-V		750	AV 2	168	180	178	175
		*		K7	LO	-50	7,5	CHP-V		750	AV 2	238	254	231	241
01	492647	501314		K7	LO	-60	7,5	CHP-V		750	AV 2	220	237	213	223
01	492648	501360		K7	QO	-40	7,5	CHP-V		600	AV 2	156	149	169	158
				K7	LO	-50	7,5	CHP-V		750	AV 2	143	141	147	144
				K7	LO	-60	7,5	CHP-V		750	AV 2	230	247	251	243
02	492648	510026		K7	LO	-60	7,5	CHP-V		600	AV 2	209	206	234	216
02	492648	516245		K7	LO	-60	7,5	CHP-V		600	AV 2	142	141	232	172
02	492648	516246		K7	LO	-60	7,5	CHP-V		600	AV 2	210	197	240	216
02	492648	516247		K7	LO	-60	7,5	CHP-V		600	AV 2	215	221	209	215
02	492648	516248		K7	LO	-60	7,5	CHP-V		600	AV 2	227	230	217	225
03	492647	501293 *		K7	QO	-40		CHP-V		750	AV 2	253	271	240	255

A04 D F Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1426AA3-02 Multiple Grades with VL-E36TM and VL- F36TM - Rev 01

for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Swal, Fabrice
Inspector

POISSONNET
Test House Manager

A01
Dillinger France
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 21.07.21 EDI AC 1

QM-System: Certification as per ISO 9001

DILLINGER

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013		A10 Advice of dispatch No./ Date of dispatch 2379823-19.07.21	A08/ Manufacturer's order/ A03 Certificate No. 468621-002 Sheet 4/...
A05 Established Inspecting body VLC MSAV	A06 Purchaser ANCOFERWALDRAM,OOSTE A07.1 No. 3080787 Final receiver ANCOFERWALDRAM,OOSTE A07.2 No.		B01 Product HEAVY PLATES
B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2) B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7			

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate No./ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
03	492647	501293 *		K7	LO	-50		CHP-V		750	AV 2	264	196	211	224
03	492647	501485		K7	LO	-60		CHP-V		600	AV 2	230	246	193	223
04	492648	507235		K7	LO	-60		CHP-V		600	AV 2	246	281	293	273
04	492648	507236		K7	LO	-60		CHP-V		600	AV 2	255	321	185	254
04	492648	507238		K7	LO	-60		CHP-V		600	AV 2	253	322	285	287
04	492648	507239		K7	QO	-40		CHP-V		600	AV 2	178	214	267	220
				K7	LO	-50		CHP-V		600	AV 2	349	266	262	292
				K7	LO	-60		CHP-V		600	AV 2	324	215	275	271

C66-C68 Supplementary tests on test samples

ITEM NO.: 01-04

DEEP ETCH TESTING AS PER DF-STANDARD =<2B: SATISFACTORY

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
492647	Y	0,103	0,412	1,559	0,010	0,0007	0,0034	0,031	0,014	0,040	0,034	0,001	0,021	0,0026	0,0006
492648	Y	0,096	0,407	1,568	0,010	0,0008	0,0036	0,023	0,005	0,025	0,031	0,001	0,020	0,0040	0,0006

B07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
492647	Y	0,002	0,0003	0,0002	0,0004	0,0013	0,0001	0,037
492648	Y	0,002	0,0000	0,0001	0,0001	0,0013	0,0001	0,031

A04 Manufacturer's mark

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A05 Established Inspecting body VLC MSAV	A06 Purchaser ANCOFERWALDRAM,OOSTE A07.1 No. 3080787 Final receiver ANCOFERWALDRAM,OOSTE A07.2 No.		B01 Product HEAVY PLATES
B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2) B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7			

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat												
492647	FO-02=	0,38	FO-31=	0,20	FO-51=	0,02	FO-52=	0,02	FO-A1=	11		
492648	FO-02=	0,37	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	9		

C95 Ladle treatment

ITEM NO.: 01-04

HEAT OF THE INDICATED ITEM: VACUUM DEGASSED

C95 Further information about ladle treatment

ITEM NO.: 01-04

FULLY KILLED AND FINE GRAIN TREATED.

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
492647	501305	K7O	0,097	0,390	1,50	0,009	0,0005	0,0041	0,029	0,014	0,039	0,031	0,001	0,019	0,002	0,0001
492647	501308	K7O	0,099	0,395	1,51	0,009	0,0007	0,0045	0,029	0,015	0,040	0,031	0,001	0,019	0,002	0,0002
492647	501311	K7O	0,101	0,391	1,52	0,010	0,0008	0,0047	0,030	0,015	0,040	0,031	0,001	0,019	0,002	0,0002
492647	501314	K7O	0,094	0,390	1,49	0,009	0,0007	0,0041	0,029	0,015	0,039	0,031	0,001	0,018	0,002	0,0002
492648	501360	K7O	0,093	0,390	1,52	0,009	0,0007	0,0041	0,022	0,005	0,022	0,029	0,001	0,018	0,002	0,0002
492648	507239	K7O	0,091	0,389	1,51	0,009	0,0008	0,0040	0,022	0,006	0,024	0,029	0,001	0,018	0,002	0,0002
492648	516246	K7O	0,097	0,392	1,52	0,010	0,0012	0,0050	0,027	0,009	0,032	0,030	0,001	0,019	0,002	0,0002
492648	516247	K7O	0,102	0,399	1,54	0,010	0,0009	0,0050	0,024	0,006	0,025	0,029	0,001	0,019	0,002	0,0002

A04 D F Manufacturer's mark

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A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.2 AS PER ISO 10474:2013

A10 Advice of dispatch No./ Date of dispatch: 2379823-19.07.21

A08/ Manufacturer's order/ A03 Certificate No.: 468621-002 Sheet: 6/...

A05 Established Inspecting body: VLC MSAV

A06 Purchaser: ANCOFERWALDRAM,OOSTE A07.1 No. 3080787

Final receiver: ANCOFERWALDRAM,OOSTE A07.2 No.

B01 Product: HEAVY PLATES

B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2)

B03 Any suppl. requirements: EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	AL-T
492647	501305	K7O	0,039
492647	501308	K7O	0,039
492647	501311	K7O	0,039
492647	501314	K7O	0,039
492648	501360	K7O	0,033
492648	507239	K7O	0,033
492648	516246	K7O	0,036
492648	516247	K7O	0,034

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01											
492647	501305	K7O	FO-02=	0,36	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	10
492647	501308	K7O	FO-02=	0,36	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	9
492647	501311	K7O	FO-02=	0,37	FO-31=	0,20	FO-51=	0,02	FO-52=	0,02	FO-A1=	8
492647	501314	K7O	FO-02=	0,36	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	10
492648	501360	K7O	FO-02=	0,36	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	8
492648	507239	K7O	FO-02=	0,35	FO-31=	0,18	FO-51=	0,02	FO-52=	0,02	FO-A1=	8
492648	516246	K7O	FO-02=	0,36	FO-31=	0,19	FO-51=	0,02	FO-52=	0,02	FO-A1=	7
492648	516247	K7O	FO-02=	0,37	FO-31=	0,20	FO-51=	0,02	FO-52=	0,02	FO-A1=	7

A04 D F Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1426AA3-02 Multiple Grades with VL-E36TM and VL- F36TM - Rev 01

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Service Qualité-Essais
Date 21.07.21 EDI AC 1

QM-System: Certification as per ISO 9001

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A05 Established Inspecting body VLC MSAV	A06 Purchaser ANCOFERWALDRAM,OOSTE A07.1 No. 3080787 Final receiver ANCOFERWALDRAM,OOSTE A07.2 No.		B01 Product HEAVY PLATES
B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2) B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7			

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-31 = C+SI/30+(MN+CR+CU)/20+MO/15+V/10+NI/60+5B
FO-51 = V +NB
FO-52 = V +NB+TI
FO-A1 = AT/N

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 01-04
EXAMINATION OF MARKING, SURFACE, SHAPE AND DIMENSIONS: THE RESULTS MEET THE REQUIREMENTS.
SURFACE AS PER EN-10163-2 CLASS B SUBCLASS 3
THICKNESS AS PER EN-10029:10-C
LENGTH AND WIDTH AS PER EN-10029:10
FLATNESS AS PER EN-10029:10-T5L

D02 Non-destructive tests - Ultrasonic testing

ITEM NO.: 01-04
UT-SPECIFICATION : EN-10160 CLASS S2 AND E3
SCANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 50 MM
EDGES : 100 MM
PERSONNEL QUALIFICATION : LEVEL 2 IN ACCORDANCE TO ISO 9712
THE TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

A04
D F
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

DNV GL Cert. No. N1426AA3-02 Multiple Grades with VL-E36TM and VL- F36TM - Rev 01

for **DNV GL**
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Service Qualité-Essais
Date 21.07.21 EDI AC 1

QM-System: Certification as per ISO 9001

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A05 Established Inspecting body VLC MSAV	A06 Purchaser ANCOFERWALDRAM,OOSTE A07.1 No. 3080787 Final receiver ANCOFERWALDRAM,OOSTE A07.2 No.		B01 Product HEAVY PLATES
B02/ Steel design. **S355G10+M** OPTION-12 (MIT RP0,2) B03 Any suppl. requirements EN-10225:09/MDS-Y20:REV.5/AWS-4.21:REV.7			

Z01-Z99 Confirmations

ITEM NO.: 01-04

THIS IS TO CERTIFY THAT THE MATERIAL/PRODUCT DESCRIBED ABOVE HAS BEEN MADE BY AN APPROVED PROCESS AND HAS BEEN SATISFACTORILY TESTED IN ACCORDANCE WITH DNV GL RULES FOR CLASSIFICATION. THIS CERTIFICATE IS ISSUED IN ACCORDANCE WITH THE SURVEY ARRANGEMENT AUTHORISED BY DNV GL IN MSARC0000ANC, WHICH IS CONTROLLED BY REGULAR AUDITING.
THIS CERTIFICATE IS ONLY VALID WITH THE SIGNATURE OF THE DNV/GL SURVEYOR.

A04 D F Manufacturer's mark

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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 21.07.21 EDI AC 1

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
UNIVERSAL STEEL HOLLAND B.V.	1721002523	121A20A	Q012102219

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec P.O.

According to the spc.----------

TMUGF Firma / MTSMD Signature: P. Ancarani

Data / Date: 16.02.2022

PAOLO ANCARANI

[X] REVIEW

[ ] WITNESS

CUSTOMER

universal
STEEL HOLLAND B.V.

De Wederik 5B
3355 SK Papendrecht
The Netherlands
www.universalsteel.nl

Rosetti Marino Spa
Via Trieste, 230
48100 - Ravenna
Italy

Traceability-list

Your ordernumber:
1721002523 121A20A
Project: 121A20A - F-DBN EPCIC8 GALLAF

Our ordernumber:
2021-4730

Item	Pcs	Type	Norm	Quality	Size	Length (mm)	Total Length mtr	Total weight (kgs)	Heatno.	Certificate no.	Mill	Country of origin
020 ~~010~~	1	Smls steel pipe	API 5L	X52PSL2-Z35	406,4x25,4 mm	11.790	11,79	2.814	991746	01-19-07-480	Tenaris	Italy
020 ~~010~~	1	Smls steel pipe	API 5L	X52PSL2-Z35	406,4x25,4 mm	11.790	11,79	2.814	992249	01-19-07-480	Tenaris	Italy
030	7	Smls steel pipe	API 5L	X52PSL2	406,4x21,44 mm	9.617	67,32	13.702	456780	B 20155/1	Arcelor	Romania
040	3	Smls steel pipe	API 5L	X52PSL2	406,4x12,7 mm	11.540	34,62	4.269	463899	B 21359/1	Arcelor	Romania
050	1	Smls steel pipe	API 5L	X52PSL2	355,6x15,88 mm	11.480	11,48	1.528	T63916	A 2018/01/003406-JAN	Trinecke Zelezarny	Czech. Rep.
050	1	Smls steel pipe	API 5L	X52PSL2	355,6x15,88 mm	10.960	10,96	1.459	T63916	A 2018/01/003406-JAN	Trinecke Zelezarny	Czech. Rep.
050	1	Smls steel pipe	API 5L	X52PSL2	355,6x15,88 mm	11.380	11,38	1.515	T63916	A 2018/01/003406-JAN	Trinecke Zelezarny	Czech. Rep.
050	1	Smls steel pipe	API 5L	X52PSL2	355,6x15,88 mm	11.410	11,41	1.519	T63916	A 2018/01/003406-JAN	Trinecke Zelezarny	Czech. Rep.
050	1	Smls steel pipe	API 5L	X52PSL2	355,6x15,88 mm	11.470	11,47	1.527	T63916	A 2018/01/003406-JAN	Trinecke Zelezarny	Czech. Rep.
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.430	11,43	1.228	1210586	B 21576/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.640	11,64	1.251	1211860	B 22295/2	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.650	11,65	1.252	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.660	11,66	1.253	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.520	11,52	1.238	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.580	11,58	1.244	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.670	11,67	1.254	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.640	11,64	1.251	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.610	11,61	1.247	68750	B 22295/1	Arcelor	Romania
060	1	Smls steel pipe	API 5L	X52PSL2	355,6x12,7 mm	11.640	11,64	1.251	68750	B 21576/4	Arcelor	Romania
070	1	Smls steel pipe	API 5L	X52PSL2	323,9x10,31 mm	11.080	11,08	884	809082	B 22388/1	Arcelor	Romania
070	1	Smls steel pipe	API 5L	X52PSL2	323,9x10,31 mm	11.600	11,60	925	267734	B 21683/2	Arcelor	Romania
070	1	Smls steel pipe	API 5L	X52PSL2	323,9x10,31 mm	11.670	11,67	931	267734	B 21683/2	Arcelor	Romania
080	1	Smls steel pipe	API 5L	X52PSL2	219,1x12,7 mm	11.480	11,48	743	1212556	B 22781/1	Arcelor	Romania
080	2	Smls steel pipe	API 5L	X52PSL2	219,1x12,7 mm	11.425	22,85	1.478	1212556	B 22781/1	Arcelor	Romania
090	9	Smls steel pipe	API 5L	X52PSL2	219,1x8,18 mm	11.421	102,79	4.374	1212557	B 22112/3	Arcelor	Romania
100	12	Smls steel pipe	API 5L	X52PSL2	168,3x10,97 mm	6.043	72,51	3.087	1213221	B 23624/1	Arcelor	Romania
	54						**542,24**	**56.038**				
	Pcs						**Mtr**	**Kgs**				

TRUE VERIFIED COPY
22 DEC 2021
PO 4721002523 12/A20A
item 020

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

+ 39 035 560 111 tel
+ 39 035 560 3827 fax

INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-07480	1 / 10
Date / Data: June 03, 2019	

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft 83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031232884 / 000110 Shipping note: Address: DOCKSIDE ROAD	Town: TS66UZ MIDDLESBOROUGH Country: United Kingdom

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta Ls	Sc	Type Tipo	Ori	Specimen dimensions Dimensioni della provetta Size Dimensioni	Area	Test temp Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.88	Elongation / Allungamento Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
991746	F6002/C	4	B	QT	Cs	L	12.66	125.90	+20	427.00	536.00	0.80	2"	50.8	21.0%	31.0%
992249	F6000	2	B	QT	Cs	L	12.67	126.10	+20	423.00	539.00	0.78	2"	50.8	22.0%	29.5%

4.6.19
GE3670052
4Y6Y1AC

B: Body / Corpo
Cs: Cylindrical specimen / Cilindrica
L: Longitudinal / Longitudinale
Lo: Initial length / Lunghezza iniziale
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
Obt: Obtained / Ottenuto
Ori: Orientation / Orientamento
QT: Quenched and tempered / Bonificato
Req. Max: Required maximum / Massimo richiesto
Req: Required / Richiesto
Sc: Specimen condition / Condizioni Provetta
U.T.S: Ultimate Tensile Strength / Rottura
Y.S: Yield Strength / Snervamento

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero: **01-19-07480** | Page / Pagina: **2 / 10**

Date / Data: **June 03, 2019**

	Customer's Order Item / Rifer. Ordine Cliente - I: 101678	Customer's Reference / Posizione Cliente: .	Manufacturer's Works Order N° / Conferma-Posizione: 1222325/011
Manufacture Process / Processo di fabbricazione: QUENCHED & TEMPERED BONIFICATI	Product Type / Tipo di prodotto: SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)		Surface / Superficie: BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE
Standard or Specification / Norme o specifica: See note nr.1 Vedi nota nr.1		Steel Grade / Grado dell'Acciaio: See note nr.2 Vedi nota nr.2	Ends / Estremità: PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'
Dimensions / Dimensioni: ø 16.000" O.D. x 1.000" W.T. ø 406.40mm O.D. x 25.40mm W.T.	Schedule / Schedula: . .	Length / Lunghezza: 38.714 ft Fixed Lg 11800 mm Fixed Lg	Quantity / Quantità: 13Pcs/Pz 522'09" ft 83204,5 lb 159.33 mt 37741 kg	Nominal Weight / Peso nominale: 160.37 lb/ft 238.66 Kg/m

TENSILE TEST / PROVA DI TRAZIONE

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition / Condizioni della provetta: Ls	Sc	Type / Tipo	Ori	Specimen dimensions / Dimensioni della provetta: Size / Dimensioni	Area / Area	Test temp / Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.88	Elongation / Allungamento: Lo 5D = 5.65√So	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
991746	F6002/C	4	B	QT	Cs	L	10.02	78.90	+20	442.00	538.00	0.82	5D	50.0	22.0%	27.5%
992249	F6000	2	B	QT	Cs	L	10.02	78.90	+20	447.00	551.00	0.81	5D	50.0	22.0%	25.5%

B: Body / Corpo
Cs: Cylindrical specimen / Cilindrica
L: Longitudinal / Longitudinale
Lo: Initial length / Lunghezza iniziale
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
Obt: Obtained / Ottenuto
Ori: Orientation / Orientamento
QT: Quenched and tempered / Bonificato
Req. Max: Required maximum / Massimo richiesto
Req: Required / Richiesto
Sc: Specimen condition / Condizioni Provetta
U.T.S: Ultimate Tensile Strength / Rottura
Y.S: Yield Strength / Snervamento

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°		Composition % / Composizione % — X 100: C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	X 1000: P	S	Sn	Al	Ti	Nb	V	As	X 10000: N	B	Pb	Sb	Ca	Bi
			H Max	16	140	45	20	20	8	20	41	25	12	10	80	25	5	20	55	10	40	80	20	120	5	100	100	50	100
			Min	--	--	20	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
			P Max	16	140	45	20	20	8	20	43	25	12	10	80	25	5	20	55	10	40	80	20	120	5	100	100	50	100
			Min	--	--	20	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
991746			H	10	111	25	13	18	6	19	36	19	4.8	4.6	56	13	2	10	25	2	16	30	7	70	2	6	22	14	1

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero: **01-19-07480** | Page / Pagina: **3 / 10**

Date / Data: **June 03, 2019**

	Customer's Order Item / Rifer. Ordine Cliente - I: **101678**	Customer's Reference / Posizione Cliente: .	Manufacturer's Works Order N° / Conferma-Posizione: **1222325/011**
Manufacture Process / Processo di fabbricazione: **QUENCHED & TEMPERED BONIFICATI**	Product Type / Tipo di prodotto: **SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)**		Surface / Superficie: **BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**
Standard or Specification / Norme o specifica: **See note nr.1 Vedi nota nr.1**		Steel Grade / Grado dell'Acciaio: **See note nr.2 Vedi nota nr.2**	Ends / Estremità: **PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 16.000" O.D. x 1.000" W.T. ø 406.40mm O.D. x 25.40mm W.T**	Schedule / Schedula: . .	Length / Lunghezza: **38.714 ft Fixed Lg 11800 mm Fixed Lg**	Quantity / Quantità: **13Pcs/Pz** 522'09" ft 83204,5 lb 159.33 mt 37741 kg	Nominal Weight / Peso nominale: **160.37 lb/ft 238.66 Kg/m**

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

				Composition % / Composizione %																									
				X 100												X 1000								X 10000					
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	P	S	Sn	Al	Ti	Nb	V	As	N	B	Pb	Sb	Ca	Bi
			H Max	16	140	45	20	20	8	20	41	25	12	10	80	25	5	20	55	10	40	80	20	120	5	100	100	50	100
			Min	--	--	20	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
Heat N°	Sample N°	Lot N°	P Max	16	140	45	20	20	8	20	43	25	12	10	80	25	5	20	55	10	40	80	20	120	5	100	100	50	100
Colata N°	Prova N°	Lotto N°	Min	--	--	20	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--	--	--	--	--	--	--	--
991746	F6002/C	4	P	9	110	24	12	17	6	18	35	18	4.7	4.5	53	12	3	9	23	2	15	30	6	60	1	11	23	20	1
991746	F6003	4	P	11	112	25	13	18	6	20	37	20	4.8	4.6	57	14	3	10	24	2	16	30	7	74	2	2	24	12	1
992249			H	10	109	25	14	17	7	17	36	19	4.4	4.2	55	15	2	10	28	2	12	30	6	66	2	15	21	9	1
992249	F6000	2	P	10	109	25	14	18	6	18	36	19	4.4	4.2	56	14	2	10	29	2	12	30	7	76	1	5	22	10	1
992249	F6001/C	2	P	10	107	25	13	17	6	16	35	19	4.3	4.1	52	13	2	9	29	2	11	30	6	56	1	8	21	13	1

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V +Ti)
F2: (Nb+V)
F3: (Cr+Mo+Ni+Cu)
H: Heat / Colata
Max: Maximum / Massimo
Min: Minimum / Minimo
P: Product / Prodotto
PCM: C+V/10+Mo/15+(Mn+Cu+Cr)/20+Si/30+Ni/60+5B

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

	Required values / Valori richiesti		Individuals / Individuali			Average / Media				Hardness type / Tipo de dureza: vickers					Formula applied / Formula Applicata										
			Min: --	Max: 248.0	Var: --	Min: --	Max: --	Var: --		Minimum martensite / martensite minima: (%): --															
Heat N°	Sample N°	Lot N°	Specimen condition			Quad.	Scale	OD						MW					ID						
Colata N°	Prova N°	Lotto N°	Ls	Sc			Scala	1	2	3	4	Dist. (mm)	Avg.	1	2	3	4	Avg.	1	2	3	4	Dist. (mm)	Avg.
991746	F6002/C	4	B	QT		1	HV10	179.0	175.0	170.0	172.0	- 1.50	174.0	174.0	169.0	169.0	169.0	170.3	175.0	177.0	177.0	173.0	1.5	175.5

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-07480	4 / 10
Date / Data: June 03, 2019	

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	101678		1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft 83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

Required values / Valori richiesti			Individuals / Individuali			Average / Media			Hardness type / Tipo de dureza: vickers						Formula applied / Formula Applicata											
			Min: –	Max: 248.0	Var: –	Min: –	Max: –	Var: –	Minimum martensite / martensite minima: (%): –																	
Heat N°	Sample N°	Lot N°	Specimen condition			Quad.	Scale	OD						MW						ID					
Colata N°	Prova N°	Lotto N°	Ls	Sc			Scala	1	2	3	4	Dist. (mm)	Avg.	1	2	3	4	Avg.	1	2	3	4	Dist. (mm)	Avg.		
992249	F6000	2	B	QT		1	HV10	175.0	161.0	177.0	169.0	- 1.50	170.5	172.0	172.0	170.0	169.0	170.8	172.0	180.0	177.0	179.0	1.5	177.0		

Avg: Average / Media	ID: Internal Diameter / Diametro interno	MW: Middle Wall / Centro da espessura	Sc: Specimen condition / Condizioni Provetta
B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	OD: Outside Diameter / Diametro esterno	Var: Variation / Variazione
Dist: Distance from outer diameter / Distanza dal diametro esterno	Max: Maximum / Massimo	QT: Quenched and tempered / Bonificato	
	Min: Minimum / Minimo	Quad: Quadrant / Quadrante	

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV				Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:				Temp: - 40		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
991746	F6002/C	outside	4	B	QT	10 x 10.00	354.0	379.0	410.0	381.0

Type/Tipo: KCV				Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:				Temp: - 40		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
992249	F6000	outside	2	B	QT	10 x 10.00	417.0	415.0	429.0	420.0

Avg: Average / Media	Minimo singolo richiesto	QT: Quenched and tempered / Bonificato	Sc: Specimen condition / Condizioni Provetta
B: Body / Corpo	L: Longitudinal / Longitudinale	Req. Min. Avg: Required minimum average / Minima media richiesta	Temp: Temperature / Temperatura
Ind. Min. Req: Individual Minimum Required /	Ls: Location of sample / Ubicazione provetta		

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero: **01-19-07480** | Page / Pagina: **5 / 10**

Date / Data: **June 03, 2019**

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
.	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:		Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1		See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'
Dimensions / Dimensioni:	**Schedule / Schedula:**	**Length / Lunghezza:**	**Quantity / Quantità:**	**Nominal Weight / Peso nominale:**
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft 83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE				Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE			
Position/Posizione:				Temp: - 40		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50		Position/Posizione:				Temp: - 40		Unit/Unità: °C	Ind.Min.Req: 35		Req.Min.Avg: 50	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato				Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.	Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.
991746	F6002/C	outside	4	B	QT	10 x 10.00	402.0	424.0	424.0	417.0	992249	F6000	outside	2	B	QT	10 x 10.00	409.0	404.0	405.0	406.0

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
QT: Quenched and tempered / Bonificato
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T: Transversal / Trasversale
Temp: Temperature / Temperatura

Type/Tipo: KCV				Orientation/Direzione: T			Unit / Unità: JOULE				Shear area / Area duttile %			
Position/Posizione:				Temp: - 50		Unit/Unità: °C	Ind.Min.Req: 20		Req.Min.Avg: 27		Ind.Min.Req: --		Req.Min.Avg: --	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato				Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.	1	2	3	Avg.
991746	F6002/C	outside	4	B	QT	10 x 10.00	406.0	418.0	392.0	405.0	100	100	100	100
992249	F6000	outside	2	B	QT	10 x 10.00	399.0	405.0	409.0	404.0	100	100	100	100

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
QT: Quenched and tempered / Bonificato
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
T: Transversal / Trasversale
Temp: Temperature / Temperatura

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-07480	6 / 10
Date / Data: June 03, 2019	

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft 83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	20,5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:^ Revision year:.... Standard:EN 10225 Year:2009 Standard:NACE MR0175/ISO 15156 Year:2015 Standard:NACE MR0103/ISO 17945 Year:2015	Norma:API 5L Anno:2018 Revisione:^ Anno della revisione:.... Norma:EN 10225 Anno:2009 Norma:NACE MR0175/ISO 15156 Anno:2015 Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Standard or specification' ACC. TO THE NORM API 5L PSL2 46TH ED., ISO 3183, EN10225, SPS T0002 REV.8, NACE MR0175/ISO15156 + TQC 20037180/2.1 Note 2 is the full description of the 'Steel grade' STEEL GR. L360 Q/X52 Q PSL2, S355G14+QT/S355G15+QT	La nota 1 è la descrizione completa delle 'Norme o specifiche' NORMA API 5L PSL2 46A EDIZ., ISO 3183, EN10225, SPS T0002 REV.8, NACE MR0175/ISO15156 + TQC 20037180/2.1 La nota 2 è la descrizione completa del 'Grado acciaio' ACCIAIO L360 Q/X52 Q PSL2, S355G14+QT/S355G15+QT

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-07480	7 / 10

Date / Data: June 03, 2019

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz		Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft	83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt	37741 kg	238.66 Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
Country of melt ITALY	Paese di colaggio acciaio ITALIA
Continuous casting and fully killed	Colaggio continuo ed acciaio di tipo calmato
Quantity detail for heat: please see tally-list	Dettaglio tubi per colata: vedere Tally-list
FOR DWTT TEST SEE ATTACHED TEST REPORT N. #X#	PER PROVA DWTT ALLEGATO REPORT N

Supplementary Information Informazioni supplementari	
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 30 GAUSS	DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESENTA UN MAGNETISMO RESIDUO SUPERIORE A 30 GAUSS
HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156	DUREZZA HRC 22 MAX, IN ACCORDO ALLA SPEC. NACE MR0175/ISO 15156
HARDNESS HBW 248 MAX, ACCORDING TO NACE MR0103/ISO 17945	DUREZZA HBW 248 MAX, IN ACCORDO ALLA SPEC. NACE MR0103/ISO 17945
PIPES HAVE BEEN QUENCHED AND TEMPERED: AUSTENITIZING TEMP. AT 920°C FOR 26 MINS, QUENCHED IN WATER AND TEMPERED AT 670 °C FOR 59 MINS.	TUTTI I TUBI SONO STATI BONIFICATI: RISCALDATI A 920 °C PER 26 MIN., TEMPRATI IN ACQUA E RINVENUTI A 670 °C PER 59 MIN.
THE WALL THICKNESS, CONTROLLED BY U.T., OF EACH PIPE IS WITHIN THE REQUESTED TOLERANCE ISO 10893-12	LO SPESSORE DEI TUBI, CONTROLLATO CON ULTRASUONI, E' CONFORME ALLE TOLLERANZE RICHIESTE ISO 10893-12
ALL PIPES HAVE BEEN TESTED FOR LAMINATION DETECTION BY U.T., WITH SATISFACTORY RESULT ISO 10893-8 U2	I TUBI SONO STATI CONTROLLATI PER LA RICERCA DI DOPPI SPESSORI CON ULTRASUONI, CON ESITO POSITIVO ISO 10893-8 U2
THE ENDS (FOR 300 mm) HAVE BEEN TESTED WITH WET FLUORESCENT MAGNETIC PARTICLES, WITH SATISFACTORY RESULT	LE ESTREMITA' DEI TUBI SONO STATE CONTROLLATE (PER 300 mm) CON PARTICELLE MAGNETICHE FLUORESCENTI UMIDE, CON ESITO SODDISFACENTE
ALL PIPES HAVE BEEN TESTED BY ULTRASONIC INSPECTION FOR TRANSVERSAL/LONGITUDINAL INSIDE/OUTSIDE DEFECTS (NOTCH 5,0 %) ACCORDING TO SPEC. ISO 10893-10 U2C WITH SATISFACTORY RESULT UT full length	TUTTI I TUBI SONO STATI CONTROLLATI CON U.S. PER LA RICERCA DI DIFETTI TRASVERSALI/LONGITUDINALI INTERNI/ESTERNI (TARATURA 5,0 %) IN ACCORDO ALLA SPEC. ISO 10893-10 U2C, CON ESITO SODDISFACENTE UT full length

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-07480	8 / 10
Date / Data: June 03, 2019	

	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz	Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft 83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information	Informazioni supplementari
compliance with the chemical composition e	conformita'a composizione chimica e
mechanical properties of Norsok M-120 sheet MDS-Y22	proprieta' meccaniche di Norsok M-120 foglio MDS-Y22
STEEL IS PRODUCED BY EAF	STEEL IS PRODUCED BY EAF
SPECIALLY DESULPHURIZED	SPECIALLY DESULPHURIZED
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE.
MANUFACTURED BY TENARIS DALMINE	FABBRICATO DA TENARIS DALMINE
NO WELD REPAIR, MERCURY AND RADIATION FREE	NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI
AS PER STANDARD, PIPES CAN BE REPAIRED; MANUFACTURER SHOULD DECIDE TO GRIND THE	COME DA PROCEDURA STANDARD, I TUBI POSSONO ESSERE RIPARATI; IL COSTRUTTORE DOVREBBE
SURFACE OF THE PIPES WHEN, DURING FINAL VISUAL INSPECTION, SOME IMPERFECTIONS	PROCEDERE ALLA RETTIFICA DELLA LORO SUPERFICIE QUANDO DURANTE L'ISPEZIONE VISIVA
ARE DETECTED. THE RESULTED SURFACE AREAS, AFTER GRINDING, HAS DIFFERENT	FINALE VENGONO RILEVATE DELLE IMPERFEZIONI. DOPO LA RETTIFICA, LE AREE SUPERFICIALI
COLORATION COMPARED WITH USUAL ONE AS MANUFACTURED. THE RESIDUAL WALL THICKNESS	INTERESSATE PRESENTANO UNA COLORAZIONE DIVERSA RISPETTO A QUELLA ORIGINALE. LO
AFTER GRINDING HAS BEEN CHECKED RESULTING IN TOLERANCE WITH STANDARD.	SPESSORE RESIDUO DELLE PARETI RIENTRA NELLA SOGLIA DI TOLLERANZA.
Tenaris IT identification number for MTC: 58:HN)fz	Numero Identificativo Tenaris IT per MTC: 58:HN)fz

TTT TEST						
		Test spec	Z(%)			
Test	Heat	Lot	Diam. (mm)	Sect. (mm2)	Min. 35.0	Rm ( )>=

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Number / Numero:	Page / Pagina:
01-19-07480	9 / 10
Date / Data: June 03, 2019	

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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz		Nominal Weight / Peso nominale:
ø 16.000" O.D. x 1.000" W.T.	.	38.714 ft Fixed Lg	522'09" ft	83204,5 lb	160.37 lb/ft
ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt	37741 kg	238.66 Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
|F6600/C1 |992249 | 2| 9.99| 78.54| 74.9| 577|	.
|F6600/C2 |992249 | 2| 9.95| 77.91| 75.1| 562|	.
|F6600/C3 |992249 | 2| 10.00| 78.54| 76.0| 561|	.
|F6602/C1 |991746 | 4| 9.96| 77.91| 74.9| 562|	.
|F6602/C2 |991746 | 4| 10.02| 78.85| 75.1| 562|	.
|F6602/C3 |991746 | 4| 9.94| 77.60| 75.7| 574|	.
| | | | | | |	.

MARKING / MARCATURA

Marking Marcatura	
STENCILING _T API Spec 5L 0038.1 _API _DATA 406,4 25,40 L360Q/X52Q PSL 2 SML S EN 10225 S355 G14+QT/S355 G15+QT HEAT: _COLATA MT _MT KG _KG NR. _NR PO 101678 - . LEGEND _T = TENARIS Logo _API = API Logo _DATA = Marking Date _COLATA = Heat Number _MT = Pipe/Tube Length in meters _KG = Pipe/Tube Weight in kilograms	VERNICIATURA _T API Spec 5L 0038.1 _API _DATA 406,4 25,40 L360Q/X52Q PSL 2 SML S EN 10225 S355 G14+QT/S355 G15+QT HEAT: _COLATA MT _MT KG _KG NR. _NR PO 101678 - . LEGENDA _T = Logo TENARIS _API = Logo API _DATA = Data di marcatura _COLATA = Numero di colata _MT = Lunghezza del tubo in metri _KG = Peso del tubo in chilogrammi

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Tenaris

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01-19-07480	10 / 10
Date / Data: June 03, 2019	

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LEG	101678	.	1222325/011

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
QUENCHED & TEMPERED BONIFICATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	See note nr.2 Vedi nota nr.2	PLAIN END (SQUARE CUT) LISCI ALLE ESTREMITA'

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 13Pcs/Pz	Nominal Weight / Peso nominale:
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ø 406.40mm O.D. x 25.40mm W.T.	.	11800 mm Fixed Lg	159.33 mt 37741 kg	238.66 Kg/m

MARKING / MARCATURA

Marking Marcatura	
_NR = Pipe/Tubo Identifier	_NR = Identificativo numerico del tubo
PUNCHING _T L360Q/X52Q S355G14+QT/S355G15+QT _COLATA NR _NR ABS	PUNZONATURA _T L360Q/X52Q S355G14+QT/S355G15+QT _COLATA NR _NR ABS
LEGEND _T = TENARIS Logo _COLATA = Heat Number _NR = Pipe/Tube Identifier	LEGENDA _T = Logo TENARIS _COLATA = Numero di colata _NR = Identificativo numerico del tubo

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance w purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Si certifica che il prodotto descritto è stato prodotto, provato, testato e controllato in conformità ai requisiti dell'ordine del cliente. Questo certificato non è una dichiarazione d'origine e non può essere usato come tale.

	CUSTOMER THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' TUNICE Alessandro	CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' FERRARI Donigio

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Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

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B 20155/1
31.08.2020

ArcelorMittal

TRUE VERIFIED COPY
22 DEC 2021
PO 1721002523 12/1A2.0A Item 030

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
19.728 tons - lbs	96.93 meters - feets	10	-

Buyer's reference PO.NO.: 498/04.08.2020
Contract 50004700

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
1	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
325	-	32.5	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
456780		Heat analysis		0.13	1.25	0.21	0.003	0.010	0.14	0.09	0.12	0.025	0.02	0.067	0.003	0.002	0.0001	0.0100
64688		Heat analysis		0.13	1.23	0.19	0.003	0.009	0.09	0.13	0.15	0.030	0.02	0.060	0.001	0.001	0.0003	0.0060
456796		Heat analysis		0.14	1.27	0.23	0.002	0.010	0.13	0.12	0.13	0.024	0.03	0.070	0.003	0.003	0.0001	0.0062
456780	20-692	Product analysis		0.13	1.26	0.21	0.002	0.011	0.13	0.09	0.12	0.024	0.02	0.067	0.002	0.002	0.0001	0.0088
456780	20-692	Product analysis		0.13	1.26	0.21	0.002	0.011	0.13	0.09	0.12	0.024	0.02	0.067	0.002	0.002	0.0001	0.0090
64688	20-691	Product analysis		0.14	1.23	0.20	0.003	0.009	0.09	0.13	0.14	0.030	0.02	0.060	0.001	0.001	0.0002	0.0063
64688	20-691	Product analysis		0.14	1.23	0.20	0.003	0.009	0.09	0.13	0.14	0.030	0.02	0.060	0.001	0.001	0.0002	0.0064
456796	20-692	Product analysis		0.14	1.25	0.22	0.003	0.011	0.12	0.10	0.12	0.023	0.03	0.069	0.002	0.001	0.0001	0.0055
456796	20-692	Product analysis		0.14	1.25	0.22	0.002	0.011	0.12	0.10	0.12	0.023	0.03	0.069	0.002	0.001	0.0001	0.0056

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/7 B 20155/1 31.08.2020	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.728 tons - lbs	96.93 meters - feets	10	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 498/04.08.2020	Dimensions: 406.40 x 21.44 mm -	Schedule: 80	Length: 8.00 - 10.00 m -	- -
Contract	**50004700**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6
1	-		325	-	32.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
456780		Heat analysis		2.50	0.072	0.437	0.40	0.28
64688		Heat analysis		5.00	0.062	0.450	0.39	0.26
456796		Heat analysis		3.87	0.076	0.480	0.41	0.29
456780	20-692	Product analysis		2.73	0.071	0.427	0.40	0.27
456780	20-692	Product analysis		2.67	0.071	0.427	0.40	0.27
64688	20-691	Product analysis		4.76	0.062	0.440	0.40	0.25
64688	20-691	Product analysis		4.69	0.062	0.440	0.40	0.25
456796	20-692	Product analysis		4.18	0.072	0.439	0.41	0.27
456796	20-692	Product analysis		4.11	0.072	0.439	0.41	0.27

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/7 B 20155/1 31.08.2020	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 19.728 tons - lbs	Total Length: 96.93 meters - feets	Pieces 10	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 498/04.08.2020

Contract 50004700

Dimensions: 406.40 x 21.44 mm - | Schedule: 80 | Length: 8.00 - 10.00 m - | - -

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	325	-	32.5	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
456780	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	202-2465	394.00	-	512.00	-	38.60	0.77
456780	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	202-2465	402.00	-	507.00	-	38.20	0.79
456780	Longitudinal Flat	-	-	10.00	-	0.00	-	78.5	-	20-1521	392.40	-	505.70	-	34.90	0.78
64688	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	202-2465	397.00	-	510.00	-	38.40	0.78
64688	Longitudinal Flat	-	-	10.00	-	0.00	-	78.5	-	20-1521	391.10	-	512.10	-	33.30	0.76
456796	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	202-2465	392.00	-	504.00	-	39.10	0.78
456796	Longitudinal Flat	-	-	10.00	-	0.00	-	78.5	-	20-1521	394.90	-	515.90	-	34.10	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
456780	20-3418	Transversal	10x10x55	0	30.0	383	371	375	40.0	376	-	-	-	100	100	100	2.32	2.27	2.28
456780	20-3419	Longitudinal	10x10x55	-50	32.0	372	358	320	40.0	350	-	-	-	100	100	100	2.27	2.23	2.16
64688	20-3420	Transversal	10x10x55	0	30.0	384	402	392	40.0	393	-	-	-	100	100	100	2.29	2.37	2.34
64688	20-3421	Longitudinal	10x10x55	-50	32.0	354	326	367	40.0	349	-	-	-	100	100	100	2.22	2.11	2.25
456796	20-3418	Transversal	10x10x55	0	30.0	392	388	382	40.0	387	-	-	-	100	100	100	2.36	2.35	2.31
456796	20-3419	Longitudinal	10x10x55	-50	32.0	363	310	347	40.0	340	-	-	-	100	100	100	2.24	2.14	2.20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/7 B 20155/1 31.08.2020	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 19.728 tons - lbs	Total Length: 96.93 meters - feets	Pieces 10	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 498/04.08.2020
Contract	**50004700**

Dimensions: 406.40 x 21.44 mm -	Schedule: 80	Length: 8.00 - 10.00 m -	- -

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	325	-	32.5	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
456780	20-2166	-	-	-	-	-	-	-	<20
64688	20-2155	-	-	-	-	-	-	-	<20
456796	20-2166	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
456780	20-661	300	295.10	-
64688	20-661	300	298.70	-
456796	20-661	300	300.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
456780	20-2659	OK
456780	20-2659	OK
64688	20-2670	OK
456796	20-2659	OK

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/7 B 20155/1 31.08.2020	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 19.728 tons - lbs	Total Length: 96.93 meters - feets	Pieces 10	Bundles -
Buyer's reference PO.NO.: 498/04.08.2020	**Standard:** API 5L cd.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1				
Contract 50004700	Dimensions: 406.40 x 21.44 mm -	Schedule: 80	Length: 8.00 - 10.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6
1	-		325	-	32.5	5	

Heat

Heat	Pieces	Length (m)	Weight (kg)
456780	8	-	-
64688	1	-	-
456796	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 6/7 B 20155/1 31.08.2020	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.728 tons - lbs	96.93 meters - feets	10	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 498/04.08.2020	Dimensions: 406.40 x 21.44 mm -	Schedule: 80	Length: 8.00 - 10.00 m -	- -
Contract 50004700				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6
1	-		325	-	32.5	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 406.40 - 21.44 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -20-0036-CPR-M-118-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036" ;"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace, source G300007; G000108.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 30 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

20
0036-CPR-M-118-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Inspector/Buyer representative

Witnessed/Reviewed
Florin Hriscu
24.09.2020

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 7/7 B 20155/1 31.08.2020	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.728 tons - lbs	96.93 meters - feets	10	-

	Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019; ASME SA 106/SA 106M/2017; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2017; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1
Buyer's reference PO.NO.: 498/04.08.2020	Dimensions: 406.40 x 21.44 mm - / Schedule: 80 / Length: 8.00 - 10.00 m - / - -
Contract 50004700	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/G Gr.6
1	-		325	-	32.5	5	

been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-21.11.2019; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/63/31 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.09.2020

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

PACKING LIST
P. O. NO. 50004700 ITEM - 1

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

24.09.2020

Goods Desc: **SEAMLESS STEEL PIPE**

Buyer PO:498/04.08.2020

OD(mm)	WT(mm)	STEEL GR.
406.40	21.44	C/X52N/L360NE/S355J2H/P355NL2TC2/6

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-19-12-1379	64688	9.66	1966
2	2-19-51-1882	456780	8.67	1765
3	2-19-51-1881	456780	9.53	1940
4	2-19-51-1846	456780	9.55	1944
5	2-19-51-1894	456780	9.70	1974
6	2-19-51-1889	456780	9.90	2015
7	2-19-51-1800	456780	9.95	2025
8	2-19-51-1798	456780	9.97	2029
9	2-19-51-1904	456780	10.00	2035
10	2-19-51-1905	456796	10.00	2035

TOTAL NUMBER OF PIECES: **10**
TOTAL METERS: **96.93**
TOTAL KILOS: **19 728**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 31.08.2020

ArcelorMittal Tubular Products Roman SA Romania

570/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

TRUE VERIFIED COPY
22 DEC 2021
PO 1721002523 121 A20 item 010

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

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18.03.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
18.518 tons - lbs	150.17 meters - feets	13	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference: PO.NO.: 649/10.02.2021
Contract 50004883

Dimensions: 406.40 x 12.70 mm
-

Schedule: XS/40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	194	-	19.4	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
463899		Heat analysis		0.13	1.20	0.21	0.003	0.009	0.07	0.07	0.13	0.024	0.02	0.072	0.003	0.002	0.0001	0.0074
463899	21-207	Product analysis		0.14	1.20	0.21	0.003	0.010	0.07	0.07	0.12	0.025	0.02	0.071	0.003	0.002	0.0002	0.0076
463899	21-207	Product analysis		0.14	1.21	0.22	0.002	0.010	0.07	0.07	0.12	0.026	0.02	0.071	0.003	0.002	0.0002	0.0074

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
463899		Heat analysis		3.24	0.077	0.362	0.38	0.22
463899	21-207	Product analysis		3.29	0.076	0.351	0.38	0.21
463899	21-207	Product analysis		3.51	0.076	0.351	0.39	0.21

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products J27/58/91 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative
24.03.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

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18.03.2021

ArcelorMittal

Total weight:	Total Length:	Pieces	Bundles
18.518 tons - lbs	150.17 meters - feets	13	-

SEAMLESS STEEL PIPE

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 649/10.02.2021

Contract 50004883

Dimensions: 406.40 x 12.70 mm
-

Schedule: XS/40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	194	-	19.4	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
463899	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	21-664	401.00	-	549.00	-	41.40	0.73
463899	Longitudinal Flat	50.8	-	40.00	-	12.90	-	516.0	-	21-664	404.00	-	550.00	-	41.90	0.73
463899	Longitudinal Flat	-	-	20.00	-	13.30	-	266.0	-	21-500	402.30	-	503.80	-	39.00	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
463899	21-772	Transversal	10x10x55	0	30.0	250	254	274	40.0	259	-	-	-	100	100	100	2.03	2.05	2.10
463899	21-773	Longitudinal	10x10x55	-50	32.0	148	131	117	40.0	132	-	-	-	95	95	90	1.32	1.16	1.03

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
463899	21-531	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/88/91 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.03.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

572/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 21359/1 18.03.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	18.518 tons - lbs	150.17 meters - feets	13	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 649/10.02.2021	Dimensions: 406.40 x 12.70 mm -	Schedule: XS/40	Length: 11.00 - 11.70 m -	- -
Contract	**50004883**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
1	-		194	-	19.4	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
463899	21-139	300	296.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
463899	21-863	OK
463899	21-863	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
463899	13	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/89/93 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.03.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 21359/1 18.03.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 18.518 tons - lbs	Total Length: 150.17 meters - feets	Pieces 13	Bundles -
Buyer's reference PO.NO.: 649/10.02.2021	**Standard:** API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1				
Contract 50004883	Dimensions: 406.40 x 12.70 mm -	Schedule: XS/40	Length: 11.00 - 11.70 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
1	-		194	-	19.4	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 406.40 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300007.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-910°C, time soaking 18 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Inspector/Buyer representative
Witnessed/Reviewed
Florin Hriscu
24.03.2021

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 21359/1 18.03.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	18.518 tons - lbs	150.17 meters - feets	13	-

Buyer's reference PO.NO.: 649/10.02.2021	**Standard:** API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1		
Contract 50004883	Dimensions: 406.40 x 12.70 mm -	Schedule: XS/40	Length: 11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
1	-		194	-	19.4	5	-

Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. 427/88/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
24.03.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

ArcelorMittal

EN

DECLARATION OF PERFORMANCE No. AMTPR-001-CPR 2019-05-17

1. Unique identification code of the product-type: **1.0576 / S355J2H**

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

Hot finished structural hollow sections S355J2H according to EN 10210-1:2006

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in metal structures or in composite metal and concrete structures.

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

ArcelorMittal Tubular Products Roman SA
Stefan cel Mare 15A/1
RO - 611040 ROMAN / Neamt

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

Not applicable

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

TÜV SÜD Notified Body Number 0036 performed
(name and identification number of the notified body, if relevant)

(i) initial inspection of the manufacturing plant and of factory production control;
(ii) continuous surveillance, assessment and evaluation of factory production control.
(description of the third party tasks as set out in Annex V)

under system **System 2+**

and issued

Certificate of conformity of the factory production control No. 0036- CPR – M – 120 – 2019 - 001
(certificate of constancy of performance, certificate of conformity of the factory production control, test/calculation reports – as relevant)

ArcelorMittal

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

Not applicable

9. Declared performance

Essential characteristics	Performance	Harmonised technical specification
Tolerances on dimensions and shapes	EN 10210-2:2006, Article 6	**EN 10210-1:2006**
Elongation	EN 10210-1:2006, Article 6.6.1, Tables A.3	
Tensile strength and Yield strength	EN 10210-1:2006, Article 6.6.1, Tables A.3	
Impact strength	EN 10210-1:2006, Article 6.6.2, Tables A.3	
Weldability, CEV	EN 10210-1:2006, Article 6.5, Tables A.2 and Article 6.7.1	
Suitability for hot dip galvanizing	EN 10210-1:2006, Article 6.7.2	

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Antonica Sergiu – Head of Quality Control
(name and function)

Roman, 2021-03-18
(place and date of issue)

(signature)

ArcelorMittal

EN

CE

0036

ArcelorMittal

ArcelorMittal Tubular Products Roman S.A.
Stefan cel Mare BL. 15A/1, RO - 611040 ROMAN / Neamt

21

AMTPR-001-CPR 2019-05-17

EN 10210-1:2006

Hot finished structural hollow sections S355J2H / 1.0576

Intended use: To be used in metal structures or in composite metal and concrete structures.

Tolerances on dimensions and shape: Elongation: Tensile strength and Yield strength: Impact strength: Weldability, CEV: Suitability for hot dip galvanizing:	Expressed as indicated in the Declaration of Performance

PACKING LIST
P. O. NO. 50004883 ITEM - 1

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

24.03.2021

Goods Desc:

SEAMLESS STEEL PIPE

Buyer PO. NO: 649/10.02.2021

OD(mm)	WT(mm)	STEEL GR.
406.40	12.70	L360NE/X52N/6/C/S355J2H/P355NL2TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-10-1954	463899	11.50	1418
2	2-21-10-1956	463899	11.38	1403
3	2-21-10-1960	463899	11.42	1408
4	2-21-10-1957	463899	11.52	1421
5	2-21-10-1952	463899	11.54	1423
6	2-21-10-1961	463899	11.54	1423
7	2-21-10-1958	463899	11.61	1432
8	2-21-10-1953	463899	11.58	1428
9	2-21-10-1959	463899	11.59	1429
10	2-21-10-1955	463899	11.60	1430
11	2-21-10-1962	463899	11.61	1432
12	2-21-10-1965	463899	11.63	1434
13	2-21-10-1964	463899	11.65	1437

TOTAL NUMBER OF PIECES: **13**
TOTAL METERS: **150.17**
TOTAL KILOS: **18 518**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 18.03.2021

ArcelorMittal Tubular Products Roman S.A.

579/ 3402

TŘINECKÉ ŽELEZÁRNY
MORAVIA STEEL

A03 Document No.:
A 2018/01/003406-JAN

1800714

A01, A05
Manufacturer: TŘINECKÉ ŽELEZÁRNY,a.s. /Průmyslová 1000 /Staré Město /739 61 Třinec /Czech Republic
Production mill : VT – VÁLCOVNA TRUB / Výstavní 1132 / 706 02 Ostrava – Vítkovice / Czech Republic

A07 Purchaser's order No.:	A08 Works order No./ Contract No.:
18102017PSL2+3.2ABS	9700255524 0041472417 / 176

A10 Advice-Note No.:

TRUE VERIFIED COPY
22 DEC 2021
PO 1721008523 12 A20A
item 050

A02 Type of inspection document:
Inspection certificate 3.2, EN 10204:2004

B01, B09-B11 Product, product dimensions, specification	B08, B13 Quantity	B02.1 Steel designation	B02.2 Product / Dimensional standard
Seamless Steel Line Pipes Hot Rolled	17 pcs 192,980 mtrs	X52N/PSL2 X42N/PSL2	API SPEC 5L 45. EDITION API SPEC 5L 45. EDITION
355,60 x 15,88 mm	26723 kgs	Gr.B Gr.C Gr.6 P355NL1/TC2 Gr.B Gr.C Gr.6 Gr.B Gr.B S355J2H L290N/PSL2 BN/PSL2 L360N/PSL2	ASTM A106/A106M 11/2015 ASTM A106/A106M 11/2015 ASTM A333/A333M 03/2016 EN 10216-3 12/2013 ASME SA106/SA106M 07/2015 ASME SA106/SA106M 07/2015 ASME SA333/SA333M 07/2015 ASME SA53/SA53M 07/2015 ASTM A53/A53M 03/2012 EN 10210-1 04/2006 ISO 3183 3. EDITION API SPEC 5L 45. EDITION ISO 3183 3. EDITION --- ASME B36.10 08/2015

B04 Product delivery condition:
normalized

B03 Supplementary requirements:
ASME SA106/SA106M-B/C SECTION II, Part A 2015 EDITION
ASME SA333/SA333M-6 SECTION II, Part A 2015 EDITION
ASME SA53/SA53M-B SECTION II, Part A 2015 EDITION
ASME BPVC Sec. II, Part D, Table Y1 (300°C)gar.
PED 2014/68/EU (No.: 07/202/9190/WZ/0812/16)
Manufacturer declares that is certified according to Article 4.3, Annex I of Directive 2014/68/EU by the notified body TÜV NORD reg. No 0045. Certificate is valid until September 2019.

Z02 Confirmed: Jana Jančová,
Officer of Attestation, Releasing and External inspection VT, Independent authorized agent

Z02 LP 3130808

Ostrava-Vítkovice :
11.01.2018

tel.: 00420/59/560/2160

MICHAELA SVARCOVA
SURVEYOR
AMERICAN BUREAU OF SHIPPING
ABS
BRNO

Z03 Inspection representative

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec

Z03 Independent authorized agent

A01, A05
Manufacturer: TŘINECKÉ ŽELEZÁRNY,a.s. /Průmyslová 1000 /Staré Město /739 61 Třinec /Czech Republic
Production mill : VT – VÁLCOVNA TRUB / Výstavní 1132 / 706 02 Ostrava – Vítkovice / Czech Republic

Bevelled ends 30° +5°/-0°, root face 1,6mm +/-0,8mm
With monogram API

Requirements :

B07.1 Heat No.	B07.2 Specimen No.	C10* Specimen shape	C11 Yield Strength Rt0,5 MPa	C12 Tensile Strength Rm MPa	C13 Elongation 2" %	C14 Reduction of area Z %
			360-495	490-630	min 30	
		C02 Specimen direction: L	C03 Test temperature(°C): +21		C15 Test method:	ASTM A370
T63916	70355/P	P	368	526	50,2	-
T63916	70371/P	P	371	538	50,6	-

B07.1 Heat No.	B07.2 Specimen No.	C10* Specimen shape	C11 Yield Strength ReH MPa	C12 Tensile Strength Rm MPa	C13 Elongation A5 %	C14 Reduction of area Z %
			360-495	490-630	min 22	
		C02 Specimen direction: L	C03 Test temperature(°C): +21		C15 Test method:	ENISO 6892-1 A2
T63916	70355/P	P	388	520	28,3	-

* P - Flat specimen
K - Round specimen

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV2 min.50J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: T		C03 Test temperature(°C): -55		C46 Test method: ISO 148-1	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	156 134 147	146				

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV min.41J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: T		C03 Test temperature(°C): -20		C46 Test method: ASTM A370	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	~244 231 ~255	~243				

Z02 Confirmed: Jana Jančová,
Officer of Attestation, Releasing and External inspection VT, Independent authorized agent

Z02 DP 3430808

Ostrava-Vítkovice :
11.01.2018

tel.: 00420/59/560/2160

MICHAELA SVARCOVA
SURVEYOR
AMERICAN BUREAU OF SHIPPING
ABS
BRNO

Z03 Inspection representative

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec

Z03 Independent authorized agent

A01, A05
Manufacturer: TŘINECKÉ ŽELEZÁRNY,a.s. /Průmyslová 1000 /Staré Město /739 61 Třinec /Czech Republic
Production mill : VT – VÁLCOVNA TRUB / Výstavní 1132 / 706 02 Ostrava – Vítkovice / Czech Republic

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV mi.27J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: T		C03 Test temperature(°C): 0		C46 Test method: ASTM A370	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	~269 ~248 ~294	~270				

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV min 18J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: L		C03 Test temperature(°C): -45		C46 Test method: ASTM A370	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	~268 ~244 150	~221				

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV2 min.27J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: L		C03 Test temperature(°C): -20		C46 Test method: ISO 148-1	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	217 211 175	201				

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV2 min.27J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: T		C03 Test temperature(°C): -40		C46 Test method: ISO 148-1	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	206 180 169	185				

Z02 Confirmed: Jana Jančová,
Officer of Attestation, Releasing and External inspection VT, Independent authorized agent

MICHAELA SVARCOVA
SURVEYOR
AMERICAN BUREAU OF SHIPPING
ABS BRNO

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec

Z02 BP3430808

Ostrava-Vítkovice :
11.01.2018

tel.: 00420/59/560/2160

Z03 Inspection representative

Z03 Independent authorized agent

A01, A05
Manufacturer: TŘINECKÉ ŽELEZÁRNY,a.s. /Průmyslová 1000 /Staré Město /739 61 Třinec /Czech Republic
Production mill : VT – VÁLCOVNA TRUB / Výstavní 1132 / 706 02 Ostrava – Vítkovice / Czech Republic

B07.1 Heat No.	B07.2 Specimen No.	C40 Impact test KV min 40J 10x10 mm		C44 Lateral expandit mm		C45 Shear fracture area %	
		C41 10x10 mm					
		C02 Specimen direction: T		C03 Test temperature(°C): -48		C46 Test method: ASTM A370	
		C42 Individual values	C43 Mean value	C44.1 Individual values	C44.2 Mean value	C45.1 Individual values	C45.2 Mean value
T63916	70355/P	~256 ~270 ~255	~260				

B07.1 Heat No.	B07.2 Specimen No.	C30 Hardness HBW NACE MR0103-2015,NACE MR0175-2015			
		max 237			
		C33 Test method: ISO 6506-1			
		C31 Individual values	C32 Mean value		
T63916	70355/P	156 156 158	157		

C70 Steelmaking process:
Basic oxygen furnace
Vacuum degassed

Steel fully killed

C71-C92
Heat chemical analysis in %: Ceq max.: 0,43

B07.1 Heat No.	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	Ti	Al	Nb	B	N	Ceq	
T63916	0,17	1,19	0,19	0,014	0,004	0,05	0,03	0,20	0,009	0,039	0,001	0,029	0,001	0,0005	0,0089	0,42	

Product chemical analysis in %: Ceq max.: 0,43

B07.1 Heat No.	B07.2 Specimen No.	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	V	Ti	Al	Nb	B	N
T63916	70355/P	0,17	1,16	0,20	0,014	0,004	0,05	0,03	0,19	0,009	0,039	0,001	0,028	0,000	0,0004	0,0093
T63916	70371/P	0,17	1,17	0,20	0,014	0,004	0,05	0,03	0,20	0,010	0,040	0,001	0,030	0,000	0,0004	0,0091

Product chemical analysis in %: Ceq max.: 0,43

B07.1 Heat No.	B07.2 Specimen No.	Ceq														
T63916	70355/P	0,42														
T63916	70371/P	0,42														

C50, D01, D02-D50, D51
Other requirements:

Visual and dimensional inspection		- satisfactory

Z02 Confirmed: Jana Jančová,
Officer of Attestation, Releasing and External inspection VT, Independent authorized agent

MICHAELA SVARCOVA
SURVEYOR
AMERICAN BUREAU OF SHIPPING
ABS BRNO

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec

Z02 BP 2430808

Ostrava-Vítkovice :
11.01.2018

tel.: 00420/59/560/2160

Z03 Inspection representative

Z03 Independent authorized agent

A01, A05
Manufacturer: TŘINECKÉ ŽELEZÁRNY,a.s. /Průmyslová 1000 /Staré Město /739 61 Třinec /Czech Republic
Production mill : VT – VÁLCOVNA TRUB / Výstavní 1132 / 706 02 Ostrava – Vítkovice / Czech Republic

Flattening test	ASTM A 530/A 999 ENISO 8492	- satisfactory
Hydrostatic test - test pressure	20,5 MPa/5s	- satisfactory
Ultrasonic testing	ASTM E213 5% L+T ENISO 10893-10 U2/C L+T	- satisfactory
Test of identity	VN 015038	- satisfactory
Residual magnetism	API 5L;ISO 3183	- satisfactory

B06 Marking of the product:
Stenciling:
-Manufacturer's logo|API SPEC 5L|0278|API sign|Month+Year|14|0,625|Weight|API 5L|X52N/X42N/BN|ISO 3183|
L290N/L360N|PSL2|ASTM/ASME A/SA 106M/53M/333M|GrB/C/6|EN 10216-3|P355NL1|TC2|EN 10210-1|S355J2H|SMLS|S|
20,5 MPa|Length|HF|LT45|Tube number|Inspector's symbol|Heat number
Hardstamping :
-Manufacturer's logo|14|0,625|ASTM/ASME A/SA106/53/333/B/C/6|API 5L|X52N/X42N/BN|PSL2|EN 10216-3|P355NL1|TC2|
EN 10210-1|S355J2H|L290N/L360N|ISO 3183|Length|Heat number|Tube number

B15 Supplementary information:
Heat No.: T63916
Tube No.: 70355,70356,70357,70358,70359,70360,70361,70362,70363,70364,70365,70366,70367,70368,
70369,70370,70371

80 % of capacity of the Charpy Impact Machine was exceeded at the Impact Test Values (see values marked with " ~ ").
The Mass Activity value of Ionizing Radiation in the Heat Analysis doesn't exceed 100 Bq/kg.
The hardness test values in HBW conform to the request max. 22 HRC (max. 237 HBW).
Width of gauge length of the tension test specimen at a room temperature - 38,1 mm /ASTM A370/.
Appendix: Declaration of Performance.

B16 Heat treatment report:
Minimum Temperature: 900 °C

Z04
CE
10
0045-CPR-0812

Z01
ALL PRODUCTS MEET REQUIREMENTS OF ABOVE MENTIONED STANDARDS AND REQUIREMENTS SPECIFIED IN ORDER. THE DECLARATION IS ISSUED UNDER THE SOLE RESPONSIBILITY OF THE SUPPLIER.

A04 Manufacturer's mark:

Z06
Electronical version of this document is protected by the electronical signature according to Regulation (EU) No. 910/2014.

Z02 Confirmed: Jana Jančová,
Officer of Attestation, Releasing and External inspection VT, Independent authorized agent

MICHAELA SVARCOVA
SURVEYOR
AMERICAN BUREAU OF SHIPPING
ABS
BRNO

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec

Z02 BT2430808

Ostrava-Vítkovice :
11.01.2018

tel.: 00420/59/560/2160

Z03 Inspection representative

Z03 Independent authorized agent

Declaration of Performance - No: 24/2015/10 according to Annex III Construction Products Regulation (305/2011/EU) and Regulation (EU) No 574/2014	
Unique identification code of the product type:	Hot-rolled steel tube S355J0H (J2H, K2H) – EN 10210-1:2006
Intended use:	Hollow section for steel construction
Manufacturer:	TŘINECKÉ ŽELEZÁRNY, a.s. Průmyslová 1000, Staré Město 739 61 Třinec, Czech Republic
System of AVCP:	System 2+
Harmonised standard: Notified body:	EN 10210-1:2006, Annex ZA TÜV NORD Systems GmbH & Co. KG Große Bahnstraße 31, D-22525 Hamburg, Germany, Nr. NB 0045 Certificate Nr. 0045-CPR-0812

Declared performance:

Essential characteristics	Performance	Harmonised technical specification
Dimensions and shape	Tolerances acc. to EN 10210-2:2006 Table 2	EN 10210-1:2006
mechanical properties tensile strength Rm (MPa) yield point ReH (MPa) longation at fracture A (%) notched bar impact work KV (J)	 470 – 630 ≤ 16 min 355 > 16 ≤ 40 min 345 > 40 ≤ 63 min 335 ≤ 40 min 22 > 40 ≤ 63 min 21 Temp. S355J0H 0°C min 27 S355J2H -20°C min 27 S355K2H -30°C min 27	EN 10210-1:2006, Annex A Table A3
Weldability (CEV)	≤ 16 0,45 > 16 ≤ 40 0,47 > 40 ≤ 65 0,50	EN 10210-1:2006, Annex A Table A2

The performance of the product identified above is in conformity with the set of declared performance.

This Declaration of Performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

TŘINECKÉ ŽELEZÁRNY, a.s.
Průmyslová 1000, Staré Město
739 61 Třinec 16

Ing. Radim Raszka
Head of Quality Assurance

Třinec, 27.10.2015

The Declarations of Performance for download:
http://www.trz.cz/web/trzsteel.nsf/link/product_certificates_en#trubky

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5 B 21576/1 20.04.2021	ArcelorMittal

TRUE VERIFIED COPY
22 DEC 2021
PO 1721001575 N1A20A
Item 0 60

		Total weight:	Total Length:	Piccs	Bundles
	SEAMLESS STEEL PIPE	7.412 tons - lbs	69.01 meters - feets	6	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference: PO.NO.: 680/24.03.2021

Contract 50004957

Dimensions: 355.60 x 12.70 mm - | Schedule: XS | Length: 11.00 - 11.70 m - | -

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	222	-	22.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

Bill: - | Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
1210586		Heat analysis		0.14	1.25	0.19	0.004	0.010	0.07	0.09	0.18	0.029	0.01	0.068	0.002	0.002	0.0003	0.0070
1210586	21-394	Product analysis		0.15	1.24	0.20	0.003	0.010	0.07	0.10	0.18	0.031	0.01	0.068	0.002	0.002	0.0003	0.0075
1210586	21-394	Product analysis		0.15	1.23	0.20	0.003	0.010	0.07	0.10	0.18	0.030	0.01	0.069	0.002	0.002	0.0003	0.0073

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
1210586		Heat analysis		4.14	0.072	0.418	0.40	0.26
1210586	21-394	Product analysis		4.13	0.072	0.428	0.40	0.26
1210586	21-394	Product analysis		4.11	0.073	0.429	0.40	0.26

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
24.04.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 21576/1 20.04.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	7.412 tons - lbs	69.01 meters - feets	6	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract	**50004957**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
2	-		222	-	22.2	5	

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1210586	Longitudinal Flat	50.8	-	40.00	-	13.40	-	536.0	-	21-1071	411.00	-	526.00	-	39.80	0.78
1210586	Longitudinal Flat	50.8	-	40.00	-	13.60	-	544.0	-	21-1071	409.00	-	524.00	-	40.60	0.78
1210586	Longitudinal Flat	-	-	20.00	-	13.30	-	266.0	-	21-751	404.90	-	522.60	-	37.90	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1210586	21-1206	Transversal	10x10x55	0	30.0	289	278	302	40.0	290	-	-	-	100	100	100	2.11	2.07	2.17
1210586	21-1207	Longitudinal	10x10x55	-50	32.0	256	271	263	40.0	263	-	-	-	100	100	100	2.01	2.06	2.03

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1210586	21-849	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.04.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 21576/1 20.04.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 7.412 tons - lbs	Total Length: 69.01 meters - feets	Pieces 6	Bundles -
	Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1				
Buyer's reference PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -	
Contract 50004957					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
2	-		222	-	22.2	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1210586	21-229	300	324.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1210586	21-1361	OK
1210586	21-1361	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
1210586	6	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

24.04.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 21576/1 20.04.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	7.412 tons - lbs	69.01 meters - feets	6	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 680/24.03.2021
Contract	50004957

Dimensions:	Schedule:	Length:	
355.60 x 12.70 mm -	XS	11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
2	-		222	-	22.2	5	C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 355.60 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 16 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
24.04.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 21576/1 20.04.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	7.412 tons - lbs	69.01 meters - feets	6	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50004957				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
2	-		222	-	22.2	5	

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
24.04.2021

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

ArcelorMittal

EN

DECLARATION OF PERFORMANCE No. AMTPR-001-CPR 2019-05-17

1. Unique identification code of the product-type: **1.0576 / S355J2H**

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

Hot finished structural hollow sections S355J2H according to EN 10210-1:2006

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in metal structures or in composite metal and concrete structures.

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

ArcelorMittal Tubular Products Roman SA
Stefan cel Mare 15A/1
RO - 611040 ROMAN / Neamt

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):

Not applicable

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

TÜV SÜD Notified Body Number 0036 performed
(name and identification number of the notified body, if relevant)

(i) initial inspection of the manufacturing plant and of factory production control;
(ii) continuous surveillance, assessment and evaluation of factory production control.
(description of the third party tasks as set out in Annex V)

under system **System 2+**

and issued

Certificate of conformity of the factory production control No. 0036- CPR – M – 120 – 2019 - 001
(certificate of constancy of performance, certificate of conformity of the factory production control, test/calculation reports – as relevant)

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

ArcelorMittal

Not applicable

9. Declared performance

Essential characteristics	Performance	Harmonised technical specification
Tolerances on dimensions and shapes	EN 10210-2:2006, Article 6	EN 10210-1:2006
Elongation	EN 10210-1:2006, Article 6.6.1, Tables A.3	
Tensile strength and Yield strength	EN 10210-1:2006, Article 6.6.1, Tables A.3	
Impact strength	EN 10210-1:2006, Article 6.6.2, Tables A.3	
Weldability, CEV	EN 10210-1:2006, Article 6.5, Tables A.2 and Article 6.7.1	
Suitability for hot dip galvanizing	EN 10210-1:2006, Article 6.7.2	

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Antonica Sergiu – Head of Quality Control
(name and function)

Roman, 2021-04-20
(place and date of issue)

(signature)

EN

ArcelorMittal

CE

0036

ArcelorMittal

ArcelorMittal Tubular Products Roman S.A.
Stefan cel Mare BL. 15A/1, RO - 611040 ROMAN / Neamt

21

AMTPR-001-CPR 2019-05-17

EN 10210-1:2006

Hot finished structural hollow sections S355J2H / 1.0576

Intended use: To be used in metal structures or in composite metal and concrete structures.

Tolerances on dimensions and shape: Elongation: Tensile strength and Yield strength: Impact strength: Weldability, CEV: Suitability for hot dip galvanizing:	Expressed as indicated in the Declaration of Performance

PACKING LIST
P. O. NO. 50004957 ITEM - 2

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

24.04.2021

Goods Desc:

SEAMLESS STEEL PIPE

Buyer PO. NO: 680/24.03.2021

OD(mm)	WT(mm)	STEEL GR.
355.60	12.70	6/C/L360NE/S355J2H/X52N/P355NL2TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-15-162	1210586	11.31	1215
2	2-21-15-165	1210586	11.50	1235
3	2-21-15-167	1210586	11.52	1237
4	2-21-15-172	1210586	11.54	1239
5	2-21-15-163	1210586	11.56	1242
6	2-21-15-166	1210586	11.58	1244

TOTAL NUMBER OF PIECES:	6
TOTAL METERS:	69.01
TOTAL KILOS:	7 412

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 20.04.2021

595/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5 B 22295/2 30.07.2021	ArcelorMittal

TRUE VERIFIED COPY 22 DEC 2021 PO 1721002523 127A20A Item 060

1	SEAMLESS STEEL PIPE	Total weight: 1.250 tons - lbs	Total Length: 11.64 meters - feets	Pieces: 1	Bundles: -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference: PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	
					Bill: -		Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
1211860		Heat analysis		0.13	1.24	0.20	0.005	0.014	0.09	0.11	0.19	0.030	0.01	0.069	0.002	0.003	0.0004	0.0050
1211860	21-914	Product analysis		0.13	1.24	0.20	0.004	0.015	0.09	0.12	0.18	0.030	0.01	0.069	0.002	0.003	0.0004	0.0052
1211860	21-914	Product analysis		0.14	1.25	0.21	0.005	0.015	0.09	0.12	0.18	0.031	0.01	0.070	0.002	0.003	0.0004	0.0054

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
1211860		Heat analysis		6.00	0.074	0.469	0.39	0.29
1211860	21-914	Product analysis		5.77	0.074	0.469	0.39	0.28
1211860	21-914	Product analysis		5.74	0.075	0.470	0.40	0.28

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max 0.85
1211860	Longitudinal Flat	50.8	-	20.00	-	13.40	-	268.0	-	21-1742	414.20	-	525.00	-	37.30	0.7920
1211860	Longitudinal Flat	-	-	40.00	-	13.60	-	544.0	-	21-1455	418.00	-	527.00	-	40.80	0.79

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. 327/98/01 România

Inspector/Buyer
Witnessed/Reviewed
Florin Hriscu

09.08.21

PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 22295/2 30.07.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 1.250 tons - lbs	Total Length: 11.64 meters - feets	Pieces 1	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1211860	21-2941	Transversal	10x10x55	0	30.0	229	237	248	40.0	238	-	-	-	100	100	100	1.90	1.94	2.01
1211860	21-2942	Longitudinal	10x10x55	-50	32.0	206	213	220	40.0	213	-	-	-	100	100	100	1.82	1.85	1.87

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1211860	21-2071	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1211860	21-574	300	316.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1211860	21-3366	OK

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/88/31 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
09.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 22295/2 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	1.250 tons - lbs	11.64 meters - feets	1	-

Buyer's reference	PO.NO.: 738/26.05.2021
Contract	50005046

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	

Heat

Heat	Pieces	Length (m)	Weight (kg)
1211860	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/8/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
09.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 22295/2 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	1.250 tons - lbs	11.64 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract	50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 355.60 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G3000706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 14-16 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0,2 %

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Serglu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

09.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 22295/2 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
-	SEAMLESS STEEL PIPE	1.250 tons - lbs	11.64 meters - feets	1	-

Buyer's reference PO.NO.: 738/26.05.2021	**Standard:** API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1		
Contract **50005046**	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J22/195/93 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
09.08.21

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 1828 ROMAN

PACKING LIST
P. O. NO. 50005046 ITEM - 10

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

09.08.21

Goods Desc: **SEAMLESS STEEL PIPE**

Buyer PO. NO: 738/26.05.2021

OD(mm)	WT(mm)	STEEL GR.
355.06	12.70	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-27-727	1211860	11.64	1250

TOTAL NUMBER OF PIECES:	**1**
TOTAL METERS:	**11.64**
TOTAL KILOS:	**1 250**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.07.2021

ArcelorMittal J27/88/51 Romania

601/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

TRUE VERIFIED COPY
22 DEC 2021
PO 4721002523 12 ALOA
Item 060

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

Page 1/5
B 22295/1
30.06.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
8.734 tons - lbs	81.33 meters - feets	7	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference: PO.NO.: 738/26.05.2021
Contract 50005046

Dimensions: 355.60 x 12.70 mm
-

Schedule: XS

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
10	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
222	-	22.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
68750		Heat analysis		0.14	1.20	0.20	0.003	0.014	0.10	0.11	0.20	0.030	0.03	0.060	0.001	0.001	0.0002	0.0092
68750	21-691	Product analysis		0.15	1.20	0.20	0.003	0.014	0.10	0.11	0.20	0.033	0.03	0.060	0.001	0.001	0.0003	0.0094
68750	21-691	Product analysis		0.15	1.21	0.20	0.003	0.014	0.10	0.12	0.20	0.032	0.03	0.061	0.001	0.001	0.0002	0.0095

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
68750		Heat analysis		3.26	0.062	0.500	0.40	0.33
68750	21-691	Product analysis		3.51	0.062	0.500	0.41	0.33
68750	21-691	Product analysis		3.37	0.063	0.511	0.41	0.33

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. Romania J27/88/91

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 26 PARIS 1828 ROMAN INDUSTRY & FACILITIES

05.07.21

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 22295/1 30.06.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 8.734 tons - lbs	Total Length: 81.33 meters - feets	Pieces 7	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
10	-		222	-	22.2	5	-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
68750	Longitudinal Flat	50.8	-	40.00	-	13.60	-	544.0	-	21-1926	422.00	-	528.00	-	41.30	0.80
68750	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	21-1926	419.00	-	529.00	-	40.70	0.79
68750	Longitudinal Flat	-	-	20.00	-	13.40	-	268.0	-	21-1279	419.00	-	523.90	-	38.40	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
68750	21-2173	Transversal	10x10x55	0	30.0	265	248	253	40.0	255	-	-	-	100	100	100	2.07	1.99	2.02
68750	21-2174	Longitudinal	10x10x55	-50	32.0	285	273	303	40.0	287	-	-	-	100	100	100	2.13	2.10	2.20

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
68750	21-1554	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/8/91

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
05.07.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

603/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 22295/1 30.06.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 8.734 tons - lbs	Total Length: 81.33 meters - feets	Pieces 7	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
10	-		222	-	22.2	5	-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
68750	21-390	300	320.80	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
68750	21-2599	OK
68750	21-2599	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
68750	7	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. Romania J27/188/92

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
05-07-21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 22295/1 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Piccs	Bundles
	SEAMLESS STEEL PIPE	8.734 tons - lbs	81.33 meters - feets	7	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
10	-		222	-	22.2	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 355.60 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G000108.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 16 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

05.07.21

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 22295/1 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	8.734 tons - lbs	81.33 meters - feets	7	-

Buyer's reference PO.NO.: 738/26.05.2021	**Standard:** API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1		
Contract 50005046	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
10	-		222	-	22.2	5	-

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representati
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

05.04.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES

606/ 3402

PACKING LIST
P. O. NO. 50005046 ITEM - 10

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRIAL FACILITIES ROMAN

05.07.21

Goods Desc: SEAMLESS STEEL PIPE

Buyer PO. NO: 738/26.05.2021

OD(mm)	WT(mm)	STEEL GR.
355.06	12.70	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-23-2456	68750	11.52	1237
2	2-21-23-2453	68750	11.58	1244
3	2-21-23-2455	68750	11.61	1247
4	2-21-23-2451	68750	11.64	1250
5	2-21-23-2448	68750	11.65	1251
6	2-21-23-2454	68750	11.66	1252
7	2-21-23-2449	68750	11.67	1253

TOTAL NUMBER OF PIECES:	7
TOTAL METERS:	81.33
TOTAL KILOS:	8 734

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.06.2021

ArcelorMittal Romania S.A. J27/99/91

607/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/5

B 21576/4

30.06.2021

ArcelorMittal

TRUE VERIFIED COPY
22 DEC 2021
PO 4500252523 Item 060

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
1.250 tons - lbs	11.64 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 680/24.03.2021

Contract 50004957

Dimensions: 355.60 x 12.70 mm
-

Schedule: XS

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	222	-	22.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
68750		Heat analysis		0.14	1.20	0.20	0.003	0.014	0.10	0.11	0.20	0.030	0.03	0.060	0.001	0.001	0.0002	0.0092
68750	21-691	Product analysis		0.15	1.20	0.20	0.003	0.014	0.10	0.11	0.20	0.033	0.03	0.060	0.001	0.001	0.0003	0.0094
68750	21-691	Product analysis		0.15	1.21	0.20	0.003	0.014	0.10	0.12	0.20	0.032	0.03	0.061	0.001	0.001	0.0002	0.0095

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
68750		Heat analysis		3.26	0.062	0.500	0.40	0.33
68750	21-691	Product analysis		3.51	0.062	0.500	0.41	0.33
68750	21-691	Product analysis		3.37	0.063	0.511	0.41	0.33

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representa
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/08/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

05.07.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

608/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 21576/4 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	1.250 tons - lbs	11.64 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 680/24.03.2021
Contract	**50004957**

Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	222	-	22.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
68750	Longitudinal Flat	50.8	-	40.00	-	13.60	-	544.0	-	21-1926	422.00	-	528.00	-	41.30	0.80
68750	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	21-1926	419.00	-	529.00	-	40.70	0.79
68750	Longitudinal Flat	-	-	20.00	-	13.40	-	268.0	-	21-1279	419.00	-	523.90	-	38.40	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
68750	21-2173	Transversal	10x10x55	0	30.0	265	248	253	40.0	255	-	-	-	100	100	100	2.07	1.99	2.02
68750	21-2174	Longitudinal	10x10x55	-50	32.0	285	273	303	40.0	287	-	-	-	100	100	100	2.13	2.10	2.20

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
68750	21-1552	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/188/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

05-07-21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 21576/4 30.06.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 1.250 tons - lbs	Total Length: 11.64 meters - feets	Pieces 1	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract 50004957				

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	222	-	22.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
68750	21-390	300	320.80	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
68750	21-2597	OK
68750	21-2597	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
68750	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representativ
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/158/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

05.07.21

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 21576/4 30.06.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 1.250 tons - lbs	Total Length: 11.64 meters - feets	Pieces 1	Bundles -
	Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1				
Buyer's reference PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -	
Contract 50004957					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
2	-		222	-	22.2	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 355.60 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G000108.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 16 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

The products was manufactured, sampled, tested, marked and inspected in accordance with the standards.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiû

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
05-07-21

Formular 12A2, rev. 3

611/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 21576/4 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	1.250 tons - lbs	11.64 meters - feets	1	-

Standard: API 5L cd.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 680/24.03.2021	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 11.00 - 11.70 m -	- -
Contract	**50004957**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
2	-		222	-	22.2	5	

the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed :
Florin Hriscu

Inspector/Buyer representative

05-07-21

Formular 12A2, rev. 3

612/ 3402

PACKING LIST
P. O. NO. 50004957 ITEM - 2

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu
ROMANIA
PARIS 1828
BUREAU ROMAN INDUSTRY & FACILITIES
05.07.21

Goods Desc:

SEAMLESS STEEL PIPE

Buyer PO. NO: 680/24.03.2021

OD(mm)	WT(mm)	STEEL GR.
355.60	12.70	6/C/L360NE/S355J2H/X52N/P355NL2TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-23-2444	68750	11.64	1250

TOTAL NUMBER OF PIECES:	**1**
TOTAL METERS:	**11.64**
TOTAL KILOS:	**1 250**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.06.2021

ArcelorMittal Tubular Products Roman S.A. Romania J27/08/91

613/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5 B 22388/1 30.06.2021	ArcelorMittal

TRUE VERIFIED COPY
22 DEC 2021
PO 1721 002523 121 A20A Item 010

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	0.883 tons - lbs	11.08 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021	Dimensions: 323.90 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -
Contract 50005046					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
8	-		197	-	19.7	5	
					Bill: -		Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
809082		Heat analysis		0.13	1.21	0.21	0.003	0.009	0.07	0.07	0.17	0.025	0.01	0.061	0.003	0.003	0.0001	0.0089
809082	21-712	Product analysis		0.13	1.23	0.22	0.003	0.010	0.08	0.08	0.16	0.028	0.01	0.062	0.003	0.003	0.0002	0.0091
809082	21-712	Product analysis		0.14	1.22	0.22	0.002	0.010	0.08	0.08	0.16	0.026	0.01	0.062	0.003	0.003	0.0002	0.0093

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
809082		Heat analysis		2.81	0.067	0.381	0.38	0.25
809082	21-712	Product analysis		3.08	0.068	0.392	0.38	0.25
809082	21-712	Product analysis		2.80	0.068	0.392	0.39	0.25

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/88/93 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
16.07.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 22388/1 30.06.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 0.883 tons - lbs	Total Length: 11.08 meters - feets	Pieces 1	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 323.90 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
8	-		197	-	19.7	5	-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
809082	Longitudinal Flat	50.8	-	40.00	-	11.20	-	448.0	-	21-1999	413.00	-	526.00	-	39.60	0.79
809082	Longitudinal Flat	50.8	-	40.00	-	10.80	-	432.0	-	21-1999	417.00	-	530.00	-	39.40	0.79
809082	Longitudinal Flat	-	-	20.00	-	11.10	-	222.0	-	21-1341	414.40	-	525.20	-	37.80	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
809082	21-2261	Transversal	10x7.5x55	0	23.0	210	225	204	30.0	213	-	-	-	100	100	100	1.86	1.92	1.82
809082	21-2262	Longitudinal	10x7.5x55	-50	24.0	186	200	179	30.0	188	-	-	-	95	100	95	1.66	1.77	1.61

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
809082	21-1633	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/188/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
16.04.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 22388/1 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
-	SEAMLESS STEEL PIPE	0.883 tons - lbs	11.08 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021	Dimensions: 323.90 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -
Contract	50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
8	-		197	-	19.7	5	-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
809082	21-411	300	316.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
809082	21-2440	OK
809082	21-2440	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
809082	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/98/191 ★★★★★ România

Witnessed/Reviewed .
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

16.07.21

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 22388/1 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	0.883 tons - lbs	11.08 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021	Dimensions: 323.90 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -
Contract	50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
8	-		197	-	19.7	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.90 - 10.31 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300089.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 12 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

16.07.21

Formular 12A2, rev. 3

617/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 22388/1 30.06.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	0.883 tons - lbs	11.08 meters - feets	1	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021
Contract	50005046

Dimensions:	Schedule:	Length:	
323.90 x 10.31 mm -	40	11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
8	-		197	-	19.7	5	C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/88/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

16.07.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

PACKING LIST
P. O. NO. 50005046 ITEM - 8

Manufacturer: ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

16.07.21

Goods Desc: SEAMLESS STEEL PIPE

Buyer PO. NO: 738/26.05.2021

OD(mm)	WT(mm)	STEEL GR.
323.90	10.31	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-22-1825	809082	11.08	883

TOTAL NUMBER OF PIECES:	1
TOTAL METERS:	11.08
TOTAL KILOS:	883

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.06.2021

Arcelor Mittal Tubular Products Roman S.A. J27/86/1991 Romania

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

TRUE VERIFIED COPY
22 DEC 2021
PO 1721002523 121 AWA
Item 010

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

Page 1/5
B 21683/2
30.04.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
1.855 tons - lbs	23.27 meters - feets	2	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 692/01.04.2021
Contract 50004963

Dimensions: 323.80 x 10.31 mm
-

Schedule: 40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	197	-	19.7	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
267734		Heat analysis		0.13	1.22	0.20	0.003	0.012	0.10	0.09	0.14	0.025	0.02	0.068	0.001	0.004	0.0001	0.0099
267734	21-478	Product analysis		0.13	1.22	0.20	0.003	0.012	0.10	0.10	0.14	0.026	0.02	0.069	0.001	0.003	0.0002	0.0099
267734	21-478	Product analysis		0.14	1.22	0.20	0.002	0.012	0.10	0.10	0.14	0.024	0.02	0.069	0.001	0.003	0.0002	0.0098

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
267734		Heat analysis		2.53	0.073	0.418	0.39	0.26
267734	21-478	Product analysis		2.63	0.073	0.429	0.39	0.26
267734	21-478	Product analysis		2.45	0.073	0.429	0.40	0.26

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
11.05.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

B 21683/2
30.04.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
1.855 tons - lbs	23.27 meters - feets	2	-

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 692/01.04.2021
Contract 50004963

Dimensions: 323.80 x 10.31 mm
-

Schedule: 40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
1	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	197	-	19.7	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
267734	Longitudinal Flat	50.8	-	40.00	-	10.20	-	408.0	-	21-1231	415.00	-	549.00	-	37.90	0.76
267734	Longitudinal Flat	50.8	-	40.00	-	10.40	-	416.0	-	21-1231	412.00	-	541.00	-	37.90	0.76
267734	Longitudinal Flat	-	-	20.00	-	10.50	-	210.0	-	21-902	419.00	-	538.10	-	36.80	0.78

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
267734	21-1431	Transversal	10x7.5x55	0	23.0	223	230	213	30.0	222	-	-	-	100	100	100	1.92	1.95	1.87
267734	21-1432	Longitudinal	10x7.5x55	-50	24.0	246	207	236	30.0	230	-	-	-	100	100	100	2.01	1.82	1.97

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
267734	21-1017	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
11.05.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 21683/2 30.04.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 1.855 tons - lbs	Total Length: 23.27 meters - feets	Pieces 2	Bundles -
	Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1				
Buyer's reference PO.NO.: 692/01.04.2021	Dimensions: 323.80 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -	
Contract 50004963					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
1	-		197	-	19.7	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
267734	21-266	300	316.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
267734	21-1702	OK
267734	21-1702	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
267734	2	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer
representative
11.05.21

BUREAU VERITAS ROMANIA 26 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 21683/2 30.04.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 1.855 tons - lbs	Total Length: 23.27 meters - feets	Pieces 2	Bundles -

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 692/01.04.2021	Dimensions: 323.80 x 10.31 mm -	Schedule: 40	Length: 11.00 - 11.70 m -	- -
Contract 50004963				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
1	-		197	-	19.7	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.80 - 10.31 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300007.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 12, 13 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Inspector Buyer
Witnessed/Reviewed
Florin Hriscu
11.05.21

Formular 12A2, rev. 3

623/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 21683/2 30.04.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	1.855 tons - lbs	23.27 meters - feets	2	-

Buyer's reference PO.NO.: 692/01.04.2021	**Standard:** API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1
Contract 50004963	Dimensions: 323.80 x 10.31 mm - Schedule: 40 Length: 11.00 - 11.70 m - - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
1	-		197	-	19.7	5	-

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
11.05.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY - FACILITIES

624/ 3402

PACKING LIST
P. O. NO. 50004963 ITEM - 1

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 25 PARIS 1828 ROMAN INDUSTRY & FACILITIES

11.05.21

Goods Desc: **SEAMLESS STEEL PIPE**

Buyer PO. NO: 692/01.04.2021

OD(mm)	WT(mm)	STEEL GR.
323.80	10.31	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-13-88	267734	11.60	925
2	2-21-13-86	267734	11.67	930

TOTAL NUMBER OF PIECES:	**2**
TOTAL METERS:	**23.27**
TOTAL KILOS:	**1 855**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.04.2021

ArcelorMittal Tubular Products Roman S.A.

625/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5 B 22781/1 30.07.2021	ArcelorMittal

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22 DEC 2021
PO 4710001523 121 A20A Item 080

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.207 tons - lbs	297.15 meters - feets	26	9

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021
Contract	50005091

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Dimensions: 219.10 x 12.70 mm -	Schedule: XS/80	Length: 11.00 - 11.70 m - -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
6	-		360	-	36.0	5	
					Bill: -		Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
1212556		Heat analysis		0.14	1.26	0.21	0.002	0.011	0.07	0.10	0.18	0.035	0.01	0.068	0.002	0.002	0.0004	0.0070
1212556	21-894	Product analysis		0.15	1.25	0.22	0.002	0.011	0.07	0.10	0.17	0.036	0.01	0.069	0.002	0.002	0.0003	0.0077
1212556	21-894	Product analysis		0.15	1.25	0.22	0.002	0.011	0.07	0.10	0.17	0.037	0.01	0.069	0.002	0.002	0.0003	0.0074

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
1212556		Heat analysis		5.00	0.072	0.428	0.40	0.26
1212556	21-894	Product analysis		4.68	0.073	0.419	0.41	0.25
1212556	21-894	Product analysis		5.00	0.073	0.419	0.41	0.25

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative
30.08.21

BUREAU VERITAS ROMANIA 28 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 22781/1 30.07.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 19.207 tons - lbs	Total Length: 297.15 meters - feets	Pieces 26	Bundles 9

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021	Dimensions: 219.10 x 12.70 mm -	Schedule: XS/80	Length: 11.00 - 11.70 m -	- -
Contract 50005091					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
6	-		360	-	36.0	5	

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
1212556	Longitudinal Flat	50.8	-	40.00	-	13.60	-	544.0	-	21-2409	424.00	-	530.00	-	41.80	0.80
1212556	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	21-2409	422.00	-	526.00	-	40.70	0.80
1212556	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	21-2409	427.00	-	529.00	-	41.60	0.81
1212556	Longitudinal Flat	-	-	20.00	-	13.50	-	270.0	-	21-1689	423.00	-	525.20	-	37.90	0.81

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1212556	21-2863	Transversal	10x10x55	0	30.0	244	227	235	40.0	235	-	-	-	100	100	100	1.98	1.90	1.94
1212556	21-2864	Longitudinal	10x10x55	-50	32.0	219	225	207	40.0	217	-	-	-	100	100	100	1.85	1.89	1.82

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.- OD	HV 10 max.- Midwall	HV 10 max.- ID	HV 10 max.- End A	HV 10 max.- End B	HRC max.22
1212556	21-2036	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
31.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 22781/1 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.207 tons - lbs	297.15 meters - feets	26	9

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021
Contract	50005091

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Dimensions:	Schedule:	Length:	
219.10 x 12.70 mm -	XS/80	11.00 - 11.70 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
6	-		360	-	36.0	5	C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1212556	21-564	300	314.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1212556	21-3504	OK
1212556	21-3504	OK
1212556	21-3504	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
1212556	26	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
31.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1823 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 22781/1 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.207 tons - lbs	297.15 meters - feets	26	9

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021	Dimensions: 219.10 x 12.70 mm -	Schedule: XS/80	Length: 11.00 - 11.70 m -	- -
Contract	50005091				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
6	-		360	-	36.0	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 219.10 - 12.70 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 9 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.05%

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
31.08.21

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	MILL TEST CERTIFICATE according to EN 10204/3.2/2004 -	Page 5/5 B 22781/1 30.07.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	19.207 tons - lbs	297.15 meters - feets	26	9

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021
Contract	50005091

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Dimensions:	Schedule:	Length:		
219.10 x 12.70 mm -	XS/80	11.00 - 11.70 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
6	-		360	-	36.0	5	C/X52N/L360NE/S355J2H/P355NL2TC2/6 -

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
31.08.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

PACKING LIST
P. O. NO. 50005091 ITEM - 6

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES
31.08.21

Goods Desc: **SEAMLESS STEEL PIPE**

Buyer PO. NO: 760 Rev.1/14.06.2021

OD(mm)	WT(mm)	STEEL GR.
219.10	12.70	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	BDLS NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	22111105	2-21-30-1359	1212556	11.22	725
2	22111105	2-21-30-1369	1212556	11.40	737
3	22111105	2-21-30-1355	1212556	11.67	754
4	22111106	2-21-30-1358	1212556	11.20	724
5	22111106	2-21-30-1371	1212556	11.48	742
6	22111106	2-21-30-1375	1212556	11.65	753
7	22111107	2-21-30-1362	1212556	11.18	723
8	22111107	2-21-30-1357	1212556	11.43	739
9	22111107	2-21-30-1366	1212556	11.64	752
10	22111108	2-21-30-1364	1212556	11.27	728
11	22111108	2-21-30-1367	1212556	11.53	745
12	22111108	2-21-30-1377	1212556	11.67	754
13	22111109	2-21-30-1360	1212556	11.20	724
14	22111109	2-21-30-1356	1212556	11.35	734
15	22111109	2-21-30-1365	1212556	11.57	748
16	22111110	2-21-30-427	1212556	11.20	724
17	22111110	2-21-30-425	1212556	11.56	747
18	22111126	2-21-30-1363	1212556	11.28	729
19	22111126	2-21-30-409	1212556	11.41	738
20	22111126	2-21-30-406	1212556	11.46	741
21	22111127	2-21-30-416	1212556	11.31	731
22	22111127	2-21-30-428	1212556	11.32	732
23	22111127	2-21-30-1376	1212556	11.59	749
24	22111128	2-21-30-437	1212556	11.43	739
25	22111128	2-21-30-407	1212556	11.56	747
26	22111128	2-21-30-405	1212556	11.57	748

TOTAL NUMBER OF PIECES: **26**
TOTAL METERS: **297.15**
TOTAL KILOS: **19 207**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 30.07.2021

631/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

TRUE VERIFIED COPY
22 DEC 2021
PO 1721002523 Item 070

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

Page 1/5
B 22112/3
31.08.2021

ArcelorMittal

Total weight:	Total Length:	Pieces	Bundles
14.072 tons - lbs	330.75 meters - feets	29	7

SEAMLESS STEEL PIPE

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference: PO.NO.: 738/26.05.2021
Contract 50005046

Dimensions: 219.10 x 8.18 mm
-

Schedule: STD/40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
3	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	232	-	23.2	5

Bill: -

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020	-	-	-	-	-	-
1212557		Heat analysis		0.14	1.26	0.20	0.003	0.011	0.07	0.09	0.18	0.034	0.01	0.069	0.002	0.002	0.0003	0.0050
1212557	21-1003	Product analysis		0.14	1.26	0.20	0.002	0.011	0.07	0.10	0.17	0.036	0.01	0.070	0.002	0.002	0.0003	0.0054
1212557	21-1003	Product analysis		0.14	1.27	0.20	0.002	0.011	0.07	0.10	0.17	0.034	0.01	0.069	0.002	0.002	0.0003	0.0057

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
1212557		Heat analysis		6.80	0.073	0.418	0.40	0.26
1212557	21-1003	Product analysis		6.67	0.074	0.420	0.40	0.25
1212557	21-1003	Product analysis		5.96	0.073	0.419	0.40	0.25

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
29-09-21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 2/5
B 22112/3
31.08.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
14.072 tons - lbs	330.75 meters - feets	29	7

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021

Contract 50005046

Dimensions: 219.10 x 8.18 mm
-

Schedule: STD/40

Length: 11.00 - 11.70 m
-

-
-

Item	Item Client
3	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	232	-	23.2	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1212557	Longitudinal Flat	50.8	-	40.00	-	9.10	-	364.0	-	21-2587	411.00	-	518.00	-	38.80	0.79
1212557	Longitudinal Flat	50.8	-	40.00	-	8.80	-	352.0	-	21-2587	413.00	-	520.00	-	39.10	0.79
1212557	Longitudinal Flat	-	-	20.00	-	8.90	-	178.0	-	21-1884	410.10	-	518.00	-	36.60	0.79
1212557	Longitudinal Flat	50.8	-	40.00	-	8.80	-	352.0	-	21-2804	408.00	-	516.00	-	37.80	0.79
1212557	Longitudinal Flat	50.8	-	40.00	-	8.50	-	340.0	-	21-2804	401.00	-	518.00	-	37.40	0.77
1212557	Longitudinal Flat	-	-	20.00	-	8.90	-	178.0	-	21-2068	407.30	-	516.90	-	36.60	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1212557	21-3139	Transversal	10x5x55	0	15.0	117	107	113	20.0	112	-	-	-	90	90	90	1.01	0.92	0.98
1212557	21-3140	Longitudinal	10x5x55	-56	16.0	97	102	109	20.0	103	-	-	-	90	90	90	0.82	0.87	0.83
1212557	21-3421	Longitudinal	10x5x55	-56	16.0	95	84	98	20.0	92	-	-	-	90	90	90	0.78	0.71	0.82
1212557	21-3422	Transversal	10x5x55	0	15.0	122	118	110	20.0	117	-	-	-	90	90	90	1.05	1.02	0.94

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1212557	21-2187	-	-	-	-	-	-	-	
1212557	21-2188	-	-	-	-	-	-	-	

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
29.09.21

BUREAU VERITAS ROMANIA
<20 20
PARIS
1828
ROMAN
INDUSTRY & FACILITIES

633/3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 22112/3 31.08.2021	ArcelorMittal

	SEAMLESS STEEL PIPE	Total weight: 14.072 tons - lbs	Total Length: 330.75 meters - feets	Pieces 29	Bundles 7

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 738/26.05.2021	Dimensions: 219.10 x 8.18 mm -	Schedule: STD/40	Length: 11.00 - 11.70 m -	- -
Contract	**50005046**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
3	-		232	-	23.2	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1212557	21-648	300	309.10	-
1212557	21-728	300	315.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1212557	21-3503	OK
1212557	21-3503	OK
1212557	21-4353	OK
1212557	21-4353	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
1212557	29	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
29.09.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 22112/3 31.08.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	14.072 tons - lbs	330.75 meters - feets	29	7

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 219.10 x 8.18 mm -	Schedule: STD/40	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
3	-		232	-	23.2	5	-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 219.10 - 8.18 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 6 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C(5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C(5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 %

Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
29.09.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

Formular 12A2, rev. 3

635/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 22112/3 31.08.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	14.072 tons - lbs	330.75 meters - feets	29	7

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 738/26.05.2021	Dimensions: 219.10 x 8.18 mm -	Schedule: STD/40	Length: 11.00 - 11.70 m -	- -
Contract 50005046				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
3	-		232	-	23.2	5	

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.
Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

29.09.21

PACKING LIST
P. O. NO. 50005046 ITEM - 3

Manufacturer:

ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu
29.09.21

BUREAU VERITAS ROMANIA 28 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Goods Desc: SEAMLESS STEEL PIPE

Buyer PO. NO: 738/26.05.2021

OD(mm)	WT(mm)	STEEL GR.
219.10	8.18	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	BDLS NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	22111822	2-21-29-2536	1212557	11.36	483
2	22111822	2-21-29-2534	1212557	11.42	486
3	22111822	2-21-29-2550	1212557	11.50	489
4	22111825	2-21-29-2541	1212557	11.30	481
5	22111825	2-21-29-2565	1212557	11.40	485
6	22111825	2-21-29-2567	1212557	11.43	486
7	22111825	2-21-29-2548	1212557	11.53	491
8	22111825	2-21-29-2560	1212557	11.58	493
9	22111826	2-21-29-2526	1212557	11.37	484
10	22111826	2-21-29-2570	1212557	11.40	485
11	22111826	2-21-29-2568	1212557	11.52	490
12	22111826	2-21-29-2559	1212557	11.54	491
13	22111826	2-21-29-2539	1212557	11.57	492
14	22111827	2-21-29-2551	1212557	11.42	486
15	22111827	2-21-29-2558	1212557	11.43	486
16	22111827	2-21-29-2531	1212557	11.47	488
17	22111827	2-21-29-2569	1212557	11.57	492
18	22111827	2-21-29-2553	1212557	11.61	494
19	22111828	2-21-29-2533	1212557	11.17	475
20	22111828	2-21-29-2543	1212557	11.42	486
21	22111828	2-21-29-2557	1212557	11.46	488
22	22111828	2-21-29-2529	1212557	11.50	489
23	22111834	2-21-29-2522	1212557	11.05	470
24	22111834	2-21-29-2528	1212557	11.15	474
25	22111834	2-21-29-2537	1212557	11.45	487
26	22112886	2-21-29-2523	1212557	11.21	477
27	22112886	2-21-29-2525	1212557	11.21	477
28	22112886	2-21-29-2527	1212557	11.27	480
29	22112886	2-21-29-2538	1212557	11.44	487

ArcelorMittal Tubular Products Roman S.A. J27/08/91 Romania

TOTAL NUMBER OF PIECES: 29
TOTAL METERS: 330.75
TOTAL KILOS: 14 072

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 31.08.2021

637/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5 B 23624/1 15.11.2021	ArcelorMittal

TRUE VERIFIED COPY
22 DEC 2021
PO 1721002523 121A20

1	SEAMLESS STEEL PIPE	Total weight: 12.255 tons - lbs	Total Length: 287.96 meters - feets	Pieces 24	Bundles 8

Item 100

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021	Dimensions: 168.30 x 10.97 mm -	Schedule: XS/80	Length: 11.00 - 12.40 m -	- -
Contract	**50005091**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
4	-		403	-	40.3	5	
					Bill: -		Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.35	0.45	0.005	0.025	0.30	0.30	0.25	0.060	0.08	0.080	0.020	0.040	0.0010	0.0120
			Min	-	0.90	0.10	-	-	-	-	-	0.020		-	-	-	-	-
1213221		Heat analysis		0.14	1.24	0.22	0.002	0.008	0.07	0.10	0.17	0.032	0.01	0.068	0.003	0.002	0.0004	0.0050
1213221	21-1283	Product analysis		0.14	1.25	0.22	0.002	0.008	0.08	0.11	0.16	0.033	0.01	0.069	0.002	0.002	0.0004	0.0056
1213221	21-1283	Product analysis		0.14	1.25	0.22	0.002	0.008	0.08	0.11	0.16	0.032	0.01	0.068	0.002	0.002	0.0003	0.0053

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW	Cr + Mo + Cu
			Max	-	0.120	1.000	0.43	0.45
			Min	2.00	-	-	-	-
1213221		Heat analysis		6.40	0.073	0.420	0.39	0.25
1213221	21-1283	Product analysis		5.89	0.073	0.429	0.40	0.25
1213221	21-1283	Product analysis		6.04	0.072	0.428	0.40	0.25

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representa
Fiz. Antonica Sergiu
Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/88/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
26.11.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 2/5.

B 23624/1

15.11.2021

ArcelorMittal

SEAMLESS STEEL PIPE

Total weight:	Total Length:	Pieces	Bundles
12.255 tons - lbs	287.96 meters - feets	24	8

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 760 Rev.1/14.06.2021

Contract 50005091

Dimensions: 168.30 x 10.97 mm
-

Schedule: XS/80

Length: 11.00 - 12.40 m
-

-
-

Item	Item Client
4	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	403	-	40.3	5

Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.85
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1213221	Longitudinal Flat	50.8	-	40.00	-	11.40	-	456.0	-	21-3562	418.00	-	524.00	-	40.20	0.80
1213221	Longitudinal Flat	50.8	-	40.00	-	11.70	-	468.0	-	21-3562	421.00	-	527.00	-	40.80	0.80
1213221	Longitudinal Flat	50.8	-	40.00	-	10.80	-	432.0	-	21-3562	411.00	-	522.00	-	39.30	0.79
1213221	Longitudinal Flat	-	-	20.00	-	11.90	-	238.0	-	21-2797	421.80	-	527.70	-	36.50	0.80
1213221	Longitudinal Flat	-	-	20.00	-	11.60	-	232.0	-	21-2797	419.80	-	525.00	-	35.90	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1213221	21-4517	Transversal	10x7.5x55	0	23.0	143	151	160	30.0	151	-	-	-	95	95	95	1.26	1.34	1.42
1213221	21-4518	Longitudinal	10x10x55	-50	32.0	135	139	147	40.0	140	-	-	-	95	95	95	1.19	1.23	1.30
1213221	21-4517	Transversal	10x7.5x55	0	23.0	137	155	148	30.0	147	-	-	-	95	95	95	1.21	1.38	1.31
1213221	21-4518	Longitudinal	10x10x55	-50	32.0	128	133	143	40.0	135	-	-	-	90	95	95	1.13	1.17	1.26

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1213221	21-3021	-	-	-	-	-	-	-	<20
1213221	21-3022	-	-	-	-	-	-	-	

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/188/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
26.11.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRY & FACILITIES ROMAN

639/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 23624/1 15.11.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	12.255 tons - lbs	287.96 meters - feets	24	8

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference	PO.NO.: 760 Rev.1/14.06.2021	Dimensions: 168.30 x 10.97 mm -	Schedule: XS/80	Length: 11.00 - 12.40 m -	- -
Contract	**50005091**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
4	-		403	-	40.3	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1213221	21-958	300	315.00	-
1213221	21-958	300	320.80	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1213221	21-5489	OK
1213221	21-5489	OK
1213221	21-5489	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
1213221	24	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Product. Roman S.A. ArcelorMittal J27/88/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
26.11.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 23624/1 15.11.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	12.255 tons - lbs	287.96 meters - feets	24	8

Standard: API 5L ed.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 760 Rev.1/14.06.2021

Contract 50005091

Dimensions: 168.30 x 10.97 mm - | Schedule: XS/80 | Length: 11.00 - 12.40 m - | -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6 -
4	-		403	-	40.3	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 168.30 - 10.97 -

API 5L/ISO 3183/ASTM A333/A333M/ASME SA333/SA333M/ASTM A106/A106M/ASME SA106/SA106M/EN 10210-1/2/EN 10216-3 -L360NE/X52N/grade 6/C/S355J2H/P355NL2 TC2

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0036 -21-0036-CPR-M-120-2019

PIPES IN COMPLIANCE WITH P.E.D. 2014/68/EU, ANNEX 1, SECTION 4.3.
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)" ;
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature 890-940°C, time soaking 5 min.
NDT full body:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal and transverse imperfections, outside & inside surface, acceptance level U2/C (5% from W.T).- cf. ISO 10893-10 – satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
Residual magnetism check - satisfactory.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0036

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT

21
0036-CPR-M-120-2019

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 %

Durability : NPD

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
26.11.21

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 23624/1 15.11.2021	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
	SEAMLESS STEEL PIPE	12.255 tons - lbs	287.96 meters - feets	24	8

Standard: API 5L cd.46/2018-PSL2; ISO 3183-2019; ASTM A 106/A 106M/2019a; ASME SA 106/SA 106M/2019; ASTM A 333/A 333M-2018; ASME SA 333/SA 333M-2019; EN 10216-3-2014; EN 10210-1-2006; EN 10210-2-2019; ASME sect II-part D-table Y1

Buyer's reference PO.NO.: 760 Rev.1/14.06.2021	Dimensions: 168.30 x 10.97 mm -	Schedule: XS/80	Length: 11.00 - 12.40 m -	- -
Contract 50005091				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: C/X52N/L360NE/S355J2H/P355NL2TC2/6
4	-		403	-	40.3	5	

Conform TRF_01.rev.0-Veldstaal-14.09.2020; ANSI NACE MR 0103/ISO 17945-2015; NACE MR0175/ISO 15156-1&2-2015.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
26.11.21

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 1828 ROMAN

PACKING LIST
P. O. NO. 50005091 ITEM - 4

Manufacturer: ARCELOR MITTAL PRODUCTS ROMAN SA
STEFAN CEL MARE STR, BL 15, SC. A, PARTER
ROMAN, NEAMT

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 INDUSTRIAL FACILITIES ROMAN

26.11.21

Goods Desc: SEAMLESS STEEL PIPE

Buyer PO. NO: 760 Rev.1/14.06.2021

OD(mm)	WT(mm)	STEEL GR.
168.30	10.97	6/C/L360NE/S355J2H/X52N/P355NL2-TC2

CRT NO	BDLS NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	22117617	2-21-40-2317	1213221	11.85	504
2	22117617	2-21-40-2318	1213221	12.07	514
3	22117617	2-21-40-2348	1213221	12.34	525
4	22117618	2-21-40-2319	1213221	12.04	512
5	22117618	2-21-40-2336	1213221	12.04	512
6	22117618	2-21-40-2347	1213221	12.33	525
7	22117619	2-21-40-2333	1213221	11.88	506
8	22117619	2-21-40-2332	1213221	11.98	510
9	22117619	2-21-40-2340	1213221	12.40	528
10	22117620	2-21-40-2305	1213221	11.86	505
11	22117620	2-21-40-2310	1213221	11.90	506
12	22117620	2-21-40-2300	1213221	11.95	509
13	22117621	2-21-40-2301	1213221	11.82	503
14	22117621	2-21-40-2313	1213221	11.97	509
15	22117621	2-21-40-2344	1213221	12.30	523
16	22117622	2-21-40-2311	1213221	11.85	504
17	22117622	2-21-40-2308	1213221	11.90	506
18	22117622	2-21-40-2298	1213221	12.38	527
19	22117623	2-21-40-2302	1213221	11.75	500
20	22117623	2-21-40-2309	1213221	11.81	503
21	22117623	2-21-40-2315	1213221	11.88	506
22	22117624	2-21-40-2330	1213221	11.72	499
23	22117624	2-21-40-2306	1213221	11.88	506
24	22117624	2-21-40-2338	1213221	12.06	513

TOTAL NUMBER OF PIECES: 24
TOTAL METERS: 287.96
TOTAL KILOS: 12 255

ArcelorMittal Tubular Products Roman S.A. J27/8/91 Romania

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE: 15.11.2021

643/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
MANNISIPRE SPA	1722001973	121A01C	Q012202343

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani **01/09/22**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL ENGINEERING

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

Manni Sipre Spa
Via Righi, 7 – 37135 Verona
in qualità di produttore, dichiara che i prodotti:
as manufacturer, declares that the manufactured products:

Riferiti alla conferma di produzione: **0000320351**
Referred to our production code:

Ordine cliente: N. 1722001973.
Customer order:

Forniti con documento di trasporto: ddt:0000122798
Supplied with transportation document no.:

ELEMENTI STRUTTURALI FINITI / FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni:
Have the following essential characteristics and performances:

Tolleranza geometriche e di forma / *Tolerances on dimensions and shape:*	EN 1090-2
Saldabilità / *Weldabilty:*	EN 10025-1-2-3-4-5-6 / EN 10210-1 / EN 10219-
Reazione al fuoco / *Fire test:*	EN 13501-1: CLASSE A1 / EN 13501-1: CLASS A1
Resilienza / *Impact test:*	EN 10025-1-2-3-4-5-6 / EN 10210-1 / EN 10219-1
Rilascio cadmio, emissione radioattività, durabilità / *Cadmium release, radioactivity emission, durability:*	NPD / NA
Costruzione / *Fabrication:*	CONFORME ALL'ORDINE EXC1-2-3-4

- Norma armonizzata di riferimento EN-1090 "Esecuzione di strutture di acciaio e di alluminio"
- *Harmonised standard EN-1090 "Execution of steel structures and aluminium structures"*
- Sistema di valutazione 2+
- *System of assessment 2+*
- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica e ha rilasciato il certificato numero 0475-CPR-437
- *Moreover we declare that the notified certification body, IIS CERT Srl (n° 0475), performed the initial inspection of the manufacturing plant and performed the checking of fabrication in the factory, surveillance, evaluation and continuous checking of the factory fabrication and issued the certificate no. 0475-CPR-437.*

CE

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.

This declaration of performance is issued under the sole responsibility of the manufacturer, Manni Sipre SpA.

01/09/2022

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
33030 Campoformio (UD) | ITALY | Via P. di Udine, 118
T. +39 0432 653611 | F. +39 0432 653600
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312

Direzione e coordinamento: MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 971 2022 **del** 28/04/22

Pag. 1

Your Ref.: OSC2270144

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122798
PLACCA/COLATA: 132313A

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/971

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A⁵	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*									
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
HEA 500		S355J2 +AR	1	20,10	0,14	1,26	0,22	0,023	0,0060	0,028	0,457	0,010	0,430
EN 10365		EN 10025-2/EN10034	2	6.223	0,151	0,150	0,027	0,004	0,004	0,032	0,026	0,0005	
No. 132052B	G	OSC2270071		42/000307	358	517	31	10,0	159,0	160,0	164,0	161,0	- 20
HEB 320		S355J2 +AR	4	20,10	0,16	1,30	0,20	0,013	0,0100	0,023	0,454	0,011	0,457
EN 10365		EN 10025-2/EN10034	8	20.397	0,131	0,151	0,026	0,004	0,002	0,023	0,020	0,0003	
No. 132313A	G	OSC2270144		42/000649	357	520	32	10,0	111,0	154,0	146,0	137,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

646/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2022 DDT / GU/971

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

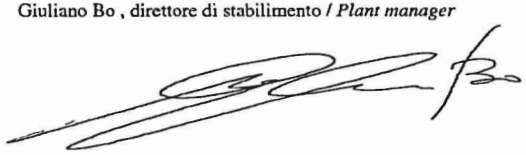
Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21



03 N° 2022 DDT / GU/971

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2022 GU/971

Arvedi Tubi Acciaio S.p.A.
26100 Cremona - Italia
Via Acquaviva, 3 - Zona Porto Canale
Tel. +39 0372 4091
Fax +39 0372 413170

www arvedi it

A01
Cap.Soc. 24.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.
R.I. CR 00113630198
R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04
Arvedi Tubi Acci

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1113928B

A02
Certificato di collaudo EN 10204/3.1

Numero A03 **806321** **Data** Z02 **09/06/2022**

Rif. conferma ordine A08 **0211261567** / **30**
Vostro ordine A07 **OSC2220526**
del **27/05/2022**

Consegna **0221546546**

Bolla A10 **0000212742** del **09/06/2022**

A06
Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**
Norma B01 **EN 10219-1 T>= 3 MM**
Marca acciaio B02 **S355J2H**
Dimens. B04;B9-B11 **SGM 110x110x8x12000 S355J2H EN 10219**
Nr.tubi B08 **20** MT B14 **240,00** KG B13 **5.575,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1113928A	0,1900	1,4000	0,1740	0,0125	0,0047	0,0409	0,0290	0,0257	0,0022	0,0416		0,0042	0,0019	0,0139		0,0007
1113928B	0,1620	1,3700	0,2140	0,0113	0,0012	0,0352	0,0388	0,0345	0,0032	0,0814		0,0025	0,0017	0,0171		0,0004

1113928A	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4349
1113928B	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4070

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >= 470 <= 630	REH (MPa) >= 355	A(%) >= 20,0	Rs/R	Fm (N)
1	**1113928**	**1113928A**		**12**	561	477	26,00		
2	**1113928**	**1113928B**		**8**	543	469	26,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	187	183	185	185	5	55	corpo del tubo – longitudinale
2	KV	-20	27	179	179	189	182	5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE
Quality Management System Certified by IGQ
TÜV manufacturer approved AD 2000 W0 -PED
DNV·GL ONVGL.COM/AP
AMMM00001HV
Arvedi

649/ 3402 **** END ****

Arvedi Tubi Acciaio S.p.A.
26100 Cremona - Italia
Via Acquaviva, 3 - Zona Porto Canale
Tel. +39 0372 4091
Fax +39 0372 413170

www arvedi it

A01

Cap.Soc. 24.000.000 EUR i.v.
Società interamente controllata
da Finarvedi S.p.A.
R.I. CR 00113630198
R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acciaio

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**806321**	**Data** Z02	**09/06/2022**
Rif. conferma ordine	0211261567	/ 30	
A08 Vostro ordine	OSC2220526		
A07 del	27/05/2022		
Consegna	0221546546		
Bolla A10	0000212742	del	09/06/2022

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Z04

Z04

CE
1608

Arvedi Tubi Acciaio S.p.A. via Acquaviva 3, I-26100 Cremona
22
1608 CPR P064

EN 10219-1:2006
DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
hiips://www arvedi it/ata/qualita-e-tecnologia/il-prodotto-lambiente-e-le-persone/

A05 Z02

UFFICIO QUALITA'
(Noris Battocletti)
Tel. +39 0372 4091
Fax +39 0372 409349
e-mail: controllo.qualita@ata.arvedi.it

Z01 Si certifica che il materiale relativo al presente certificato è stato controllato ed è conforme all'ordine. Questo certificato è stato creato da un sistema automatico di gestione dei dati e pertanto non contiene nessuna firma ma riporta i riferimenti dell'ufficio competente.

CE

Quality Management System Certified by IGQ

TÜV manufacturer approved AD 2000 W0 -PED

DNV·GL

AMMM00001HV

Arvedi

Arvedi Tubi Acciaio S.p.A.
26100 Cremona - Italia
Via Acquaviva, 3 - Zona Porto Canale
Tel. +39 0372 4091
Fax +39 0372 413170

www arvedi it

A01

Cap.Soc. 24.000.000 EUR i.v.
Società soggetta all'attività di direzione e coordinamento di
Finarvedi S.p.A.
Società con Socio Unico
R.I. CR 00113630198
R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acci

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1113928A

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**814310**	**Data** Z02	**03/08/2022**
Rif. conferma ordine A08	**0211263423**	/	**30**
Vostro ordine	**OSC2220769**		
del A07	**28/07/2022**		
Consegna	**0221552430**		
Bolla A10	**0000216677**	del	**03/08/2022**

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**

Norma B01 **EN 10219-1 T>= 3 MM**

Marca acciaio B02 **S355J2H**

Dimens. B04;B9-B11 **SGM 110x110x8x12000 S355J2H EN 10219**

Nr.tubi B08 **12** MT B14 **144,00** KG B13 **3.334,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1113928A	0,1900	1,4000	0,1740	0,0125	0,0047	0,0409	0,0290	0,0257	0,0022	0,0416		0,0042	0,0019	0,0139		0,0007

1113928A	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4349

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >= 470 <= 630	REH (MPa) >= 355	A(%) >= 20,0	Rs/R	Fm (N)
1	**1113928**	**1113928A**		**12**	561	477	26,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	187	183	185	185	5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE

Quality Management System Certified by IGQ

TÜV manufacturer approved AD 2000 W0 -PED

DNV·GL ONVGL.COM/AP
AMMM00001HV

Arvedi

Arvedi Tubi Acciaio S.p.A.
26100 Cremona - Italia
Via Acquaviva, 3 - Zona Porto Canale
Tel. +39 0372 4091
Fax +39 0372 413170

www arvedi it

A01

Cap.Soc. 24.000.000 EUR i.v.
Società soggetta all'attività di
direzione e coordinamento di
Finarvedi S.p.A.
Società con Socio Unico
R.I. CR 00113630198
R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acciaio

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**814310**	**Data** Z02	**03/08/2022**
Rif. conferma ordine	0211263423	/ 30	
A08 Vostro ordine	OSC2220769		
A07 del	28/07/2022		
Consegna	0221552430		
Bolla A10	0000216677	del	03/08/2022

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Z04

Z04

CE

1608

Arvedi Tubi Acciaio S.p.A. via Acquaviva 3, I-26100 Cremona

22

1608 CPR P064

EN 10219-1:2006

DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
hiips://www arvedi it/ata/qualita-e-tecnologia/il-prodotto-lambiente-e-le-persone/

A05 Z02

UFFICIO QUALITA'
(Noris Battocletti)
Tel. +39 0372 4091
Fax +39 0372 409349
e-mail: controllo.qualita@ata.arvedi.it

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Società con Socio Unico
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R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acci

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1114992B

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**814313**	**Data** Z02	**03/08/2022**
Rif. conferma ordine A08	0211263554	/ 10	
Vostro ordine	OSC2220787		
A07 del	01/08/2022		
Consegna	0221552430		
Bolla A10	0000216677	del	03/08/2022

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**

Norma B01 **EN 10219-1 T>= 3 MM**

Marca acciaio B02 **S355J2H**

Dimens. B04;B9-B11 **SGM 140x140x10x12000 S355J2H EN 10219**

Nr.tubi B08 **18** MT B14 **216,00** KG B13 **8.164,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1114992A	0,2040	1,0700	0,2040	0,0055	0,0001	0,0294	0,0633	0,0721	0,0120	0,2580		0,0012	0,0144	0,0029		0,0039
1114992B	0,2060	1,0600	0,2070	0,0060	0,0001	0,0291	0,0818	0,0752	0,0121	0,2380		0,0013	0,0142	0,0032		0,0035

1114992A	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4196
1114992B	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4226

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >= 470 <= 630	REH (MPa) >= 355	A(%) >= 20,0	Rs/R	Fm (N)
1	**1114992**	**1114992A**		**12**	582	504	23,00		
2	**1114992**	**1114992B**		**6**	579	492	22,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	64	67	75	69	7,5	55	corpo del tubo – longitudinale
2	KV	-20	27	72	78	78	76	7,5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE

Quality Management System Certified by IGQ

TÜV manufacturer approved AD 2000 W0 -PED

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AMMM00001HV

Arvedi

*653/34402E ****

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R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04
Arvedi Tubi Acciaio

Certificato di collaudo EN 10204/3.1

A02

Numero A03	**814313**	**Data** Z02	**03/08/2022**
Rif. conferma ordine A08	0211263554	/	10
Vostro ordine	OSC2220787		
A07 del	01/08/2022		
Consegna	0221552430		
Bolla A10	0000216677	del	03/08/2022

A06
Spett.le
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VR IT

Z04

Z04
CE
1608

Arvedi Tubi Acciaio S.p.A. via Acquaviva 3, I-26100 Cremona
22
1608 CPR P064

EN 10219-1:2006
DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
hiips://www arvedi it/ata/qualita-e-tecnologia/il-prodotto-lambiente-e-le-persone/

A05 Z02
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A04

Arvedi Tubi Acci

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NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1114992A

A02

Certificato di collaudo EN 10204/3.1

Numero A03 **815802** **Data** Z02 **26/08/2022**

Rif. conferma ordine A08 **0211263927** / **130**

Vostro ordine A07 **OSC2220812**

del **23/08/2022**

Consegna **0221553705**

Bolla A10 **0000217470** del **26/08/2022**

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**

Norma B01 **EN 10219-1 T>= 3 MM**

Marca acciaio B02 **S355J2H**

Dimens. B04;B9-B11 **SGM 140x140x10x12000 S355J2H EN 10219**

Nr.tubi B08 **6** MT B14 **72,00** KG B13 **2.723,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1114992A	0,2040	1,0700	0,2040	0,0055	0,0001	0,0294	0,0633	0,0721	0,0120	0,2580		0,0012	0,0144	0,0029		0,0039

1114992A	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4196

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >=	R (MPa) <=	REH (MPa) >=	A(%) >=	Rs/R	Fm (N)
					470	630	355	20,0		
1	**1114992**	**1114992A**		**6**	582		504	23,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	64	67	75	69	7,5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE

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TÜV manufacturer approved AD 2000 W0 -PED

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Arvedi

**** 655/ 3402E ****

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Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acciaio

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**815802**	**Data** Z02	**26/08/2022**
Rif. conferma ordine A08	0211263927	/	130
Vostro ordine	OSC2220812		
del A07	23/08/2022		
Consegna	0221553705		
Bolla A10	0000217470	del	26/08/2022

A06

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Z04

Z04

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22

1608 CPR P064

EN 10219-1:2006

DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
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A05 Z02

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Fax +39 0372 409349
e-mail: controllo.qualita@ata.arvedi.it

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R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04

Arvedi Tubi Acci

MANNI SIPRE
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NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1113861C

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**811903**	**Data** Z02	**19/07/2022**
Rif. conferma ordine A08	**0211263033**	/	**230**
Vostro ordine A07	**OSC2220717**		
del	**15/07/2022**		
Consegna	**0221551400**		
Bolla A10	**0000215534**	del	**19/07/2022**

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**

Norma B01 **EN 10219-1 T>= 3 MM**

Marca acciaio B02 **S355J2H**

Dimens. B04;B9-B11 **SGM 120x120x10x12000 S355J2H EN 10219**

Nr.tubi B08 **18** MT B14 **216,00** KG B13 **6.836,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1113861C	0,1960	1,4100	0,2030	0,0100	0,0073	0,0390	0,0365	0,0398	0,0034	0,0954		0,0020	0,0013	0,0217		0,0009

1113861C	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4484

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >=	R (MPa) <=	REH (MPa) >=	A(%) >=	Rs/R	Fm (N)
					470	630	355	20,0		
1	**1114689**	**1113861C**		**18**	557		456	24,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	191	181	185	186	7,5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE

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Arvedi

*657/3402E ****

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Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04
Arvedi Tubi Acciaio

A02
Certificato di collaudo EN 10204/3.1

A03 Numero	811903	Z02 Data	19/07/2022
Rif. conferma ordine	0211263033	/ 230	
A08 Vostro ordine	OSC2220717		
A07 del	15/07/2022		
Consegna	0221551400		
Bolla A10	0000215534	del	19/07/2022

A06
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VR IT

Z04

Z04
CE
1608

Arvedi Tubi Acciaio S.p.A. via Acquaviva 3, I-26100 Cremona
22
1608 CPR P064

EN 10219-1:2006
DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
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A05 **UFFICIO QUALITA'**
Z02 (Noris Battocletti)
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e-mail: controllo.qualita@ata.arvedi.it

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A01

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R.E.A. CR 90188
Mecc. Est. CR 000296
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A04

Arvedi Tubi Acci

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NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000122797
PLACCA/COLATA: 1113911B

A02

Certificato di collaudo EN 10204/3.1

Numero A03	**806320**	**Data** Z02	**09/06/2022**
Rif. conferma ordine A08	**0211261567**	/	**40**
Vostro ordine A07 del	**OSC2220526**		**27/05/2022**
Consegna	**0221546546**		
Bolla A10	**0000212742**	del	**09/06/2022**

A06

Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Descrizione B01 **TUBO ELETTROSALDATO**

Norma B01 **EN 10219-1 T>= 3 MM**

Marca acciaio B02 **S355J2H**

Dimens. B04;B9-B11 **SGM 110x110x10x12000 S355J2H EN 10219**

Nr.tubi B08 **18** MT B14 **216,00** KG B13 **6.161,00**

Analisi chimica
C71-C92

	C	Mn	Si	P	S	Al	Cr	Ni	Mo	Cu	Sn	V	Nb	Ti	B	N
min						0,0200										
max	0,2500	1,7000	0,6000	0,0400	0,0400		0,3000	0,5000	0,1000	0,3500		0,1200	0,0500	0,0300		0,0110
B07																
1113911B	0,1750	1,4800	0,2040	0,0114	0,0007	0,0380	0,0458	0,0251	0,0025	0,0317		0,0014	0,0198	0,0022		0,0021

1113911B	C+MN/6+(CR+MO+V)/5+(NI+CU)/15		<=0,45	0,4354

Prove meccaniche e tecnologiche
C10-C29

	Ord.produz. B07	Colata/Serie B07	Lotto B07	Nr.tubi	R (MPa) >= 470 <= 630	REH (MPa) >= 355	A(%) >= 20,0	Rs/R	Fm (N)
1	**1113911**	**1113911B**		**18**	575	489	22,00		

Resilienza
C40-C49

	Codice	°C C03	Limite (J/cm2)	Valori C42			Media C43	Dim.Provino C41		Posizione C01-C02
1	KV	-20	27	81	90	86	86	7,5	55	corpo del tubo – longitudinale

Tipo prova B06;D1-D6;D51-D60	Norma di riferimento	Richiesto	Um	N.prove	Risultato
CND	EN ISO 10893-2	E4	%	100	**FAVOREVOLE**
DIMENSIONALE	EN 10219-2		LOT	1	**FAVOREVOLE**
VISIVO	EN 10219-1		%	100	**FAVOREVOLE**

Note
D51

CE

Quality Management System Certified by IGQ

TÜV manufacturer approved AD 2000 W0 -PED

DNV·GL AMMM00001HV

Arvedi

*659/3402E ****

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R.E.A. CR 90188
Mecc. Est. CR 000296
C.F. e Part. IVA IT 00113630198

A04
Arvedi Tubi Acciaio

Certificato di collaudo EN 10204/3.1

A02

Numero A03	**806320**	**Data** Z02	**09/06/2022**
Rif. conferma ordine	0211261567	/ 40	
A08 Vostro ordine	OSC2220526		
A07 del	27/05/2022		
Consegna	0221546546		
Bolla A10	0000212742	del	09/06/2022

A06
Spett.le
MANNI SIPRE S.P.A.

VIA A. RIGHI (ZAI) 7

37135 Verona

VR IT

Z04

Z04
CE
1608

Arvedi Tubi Acciaio S.p.A. via Acquaviva 3, I-26100 Cremona
22
1608 CPR P064

EN 10219-1:2006
DoP n. 10219-01072013-3

Cold formed welded structural hollow sections of non-alloy structural steels
Profilati cavi per impieghi strutturali formati a freddo di acciai non legati e a grano fine

Product designation *(Designazione prodotto):*	S355J2H
Dimensional Tolerances *(Tolleranze dimensionali):*	EN 10219-2
Elongation *(Allungamento):*	EN 10219-1
Tensile and Yield strength *(Carico di snervamento a rottura):*	EN 10219-1
Impact energy *(Resilienza):*	EN 10219-1
Weldability *(Saldabilità):*	EN 10219-1

DOP scaricabile al presente link:
hiips://www arvedi it/ata/qualita-e-tecnologia/il-prodotto-lambiente-e-le-persone/

A05 **UFFICIO QUALITA'**
Z02 (Noris Battocletti)
Tel. +39 0372 4091
Fax +39 0372 409349
e-mail: controllo.qualita@ata.arvedi.it

Z01 Si certifica che il materiale relativo al presente certificato è stato controllato ed è conforme all'ordine. Questo certificato è stato creato da un sistema automatico di gestione dei dati e pertanto non contiene nessuna firma ma riporta i riferimenti dell'ufficio competente.

CE | Quality Management System Certified by IGQ | TÜV manufacturer approved AD 2000 W0 -PED | DNV·GL AMMM00001HV | Arvedi

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
MANNISIPRE SPA	1722001973	121A01C	Q012202373

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani — **16/09/22**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Seria HD AMHD nr.1450078217

Furnizor:
ArcelorMittal Hunedoara SA
Cod inreg.T.V.A. RO2126855
Nr.ord.Reg.Com./an: J20/41/1991
IBAN: RO15BRDE220SV04204002200
BANCA: B.R.D.-sucursala Hunedoara
IBAN: RO88RNCB0162019814360001
BANCA: B.C.R.-sucursala Hunedoara
Capital social: 248.407.785 RON

Destinatar:
MANNISIPRE C/O ROSSETTI MARINO SPA
401041
VIA TRIESTE 230
I-48100 RAVENNA RA
Nr.ord.reg.com/an:
C.U.I.:
Contul:
Banca:

ArcelorMittal

AVIZ DE INSOTIRE A MARFII

Nr. aviz:1450078217
Data 13.09.2022

Contract: 500057	Comanda: 509041775	Sectie: Laminor 650	Depozit: 213-DEP. PF LAMINOR
Client: ArcelorMittal Commercial Italy SRL			Tara: Italy
Dispozitie de livrare:1450078217		Nr..Prebon/Comanda: 1100653300	
Denumire Produs: Profile categorie 1			

Pozitie comanda	Tipo dimensiuni	Calitate	Lungime	Sarja	Indicator calitate	Id.Pachet	Bucati	Cantitate (TO)
1	HE100A	S355J2	F12,10 m	70760	N0	2A-09-06-031	24	4,732
1	HE100A	S355J2	F12,10 m	70760	N0	2A-09-06-032	24	4,732
1	HE100A	S355J2	F12,10 m	70760	N0	2A-09-06-033	24	4,732
1	HE100A	S355J2	F12,10 m	70760	N0	2A-09-06-034	24	4,732
1	HE100A	S355J2	F12,10 m	70760	N0	2A-09-06-035	24	4,732
TOTAL						5	120	23,660

Alte mentiuni: ITALIA
800049400

Semnatura si stampila furnizorului

Numele delegatului: CURSARU IONUT-COSMIN
B.I./C. I. seria: PX 792767 PRAHOVA
Mijlocul de transport: Auto Nr.: IF82PRO/PH07PSF
Expedierea s-a efectuat in prezenta noastra la data de 13.09.2022 **ora** 20:27:46
Semnatura delegatului:

ArcelorMittal Hunedoara SA BIROU LOGISTICĂ J20/41/1991 RO2126855 HUNEDOARA - ROMÂNIA

ArcelorMittal Hunedoara S.A.
DJ 687, Nr.4
331111 HD Hunedoara Romania
T +40 / F +40
Registration no.:2126855
VAT no.: RO2126855

ROSETTI MARINO SpA
15 SET 2022
RICEVUTO CON RISERVA
Sede Via Trieste

TS:13.09.2022 20:27:46 10.191.3.124-SID-WS71419
DN-TQZN48-1450078217

662/ 3402

ArcelorMittal Hunedoara S.A. DJ 687, nr. 4, Cod 331111, Hunedoara-Romania	ArcelorMittal
CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE **SR EN 10204:2005 (EN 10204:2004) 3.1**	**ArcelorMittal HUNEDOARA S.A:** Quality Inspection & Statistics Hunedoara-Romania Cod 331111
Destinatar / Destined to: MANNISIPRE C/O ROSSETTI MARINO SPA	**Nr. / No.:** 1450078217 **Data / Date** 13.09.2022
Adresa/Address: VIA TRIESTE 230, , 48100, RAVENNA **Tara/State:** Italy	**Comanda nr. / Order no.:** 1100653300
Vagon/Wagon / Auto/Truck: IF82PRO/PH07PSF	

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Tolerania la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^{0}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	70760	S355J2+M	HE100A	120	23.660	12100	-0 / +100	406	524	29,0	300/7,5	-20	142,0	146,0	138,0	142,0

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	70760	0,120	1,190	0,220	0,008	0,012	0,100	0,150	0,350	0,030	0,001	0,043	0,033	0,019	0,0003	0,0012	0,0091			0,386

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate The above mantioned material has not displayed any radioactivity	Intocmit/Elaborate:	CE 12/1823
Inspectia Calitatii si Statistici/Quality Inspection & Statistics Quality Manager:Ileana Cristea Eng.	ILIE ROMAN RASPUTNEAC	

Form.PC-12 rev.5

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
MANNISIPRE SPA	1722001973	121A01C	Q012202348

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani — **05/09/22**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000215315
PLACCA/COLATA: 59862

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

666/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20021186
A07 Your Order No.: OSC2260716

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2223/6-2022
Advice No. 800110307

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
1	59862	HE 200B	EN 10365	12.100 mm	21	15.555 kg
1	59863	HE 200B	EN 10365	12.100 mm	12	8.895 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
59862	0,09	0,19	1,40	0,022	0,019	0,011	0,014	0,040	0,007	0,09
59863	0,09	0,21	1,42	0,020	0,018	0,011	0,016	0,040	0,007	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
59862	0,30	0,14	0,03	0,024	0,38
59863	0,29	0,14	0,03	0,024	0,38

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
59862	426	546	31,0	
59863	416	533	30,0	

Z03 Works inspector
René Merbach

Z02 23.06.2022

Z04

CE

0769

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20021186
A07 Your Order No.: OSC2260716

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2223/6-2022**
Advice No. 800110307

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
59862	KV 450	L	-20 °C	19 / 27	113	31	144	96
59863	KV 450	L	-20 °C	19 / 27	120	60	121	100

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 23.06.2022

Z04

CE

0769

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
MANNISIPRE SPA	1722001973	121A01C	Q012202347

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani **05/09/22**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 6249 2022 **del** 14/06/22

Pag. 1

Your Ref.: OSC2230351 16-525 / 10/06/22

A06 **CLIENTE / *CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000304208
PLACCA/COLATA: 134243B

000659

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE PA/6249

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A06 Nostro ordine N. / *Our Order N.*

B01 Prodotto e Dimensioni / *Product and Dimension*	(*)	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A06 Nostro ordine N. / *Our Order N.*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEA 200		S275J0 +AR	1	12,10	0,10	0,72	0,19	0,012	0,0130	0,009	0,288	0,010	0,277
EN 10365		EN10025-2/EN10034	9	4.634	0,093	0,136	0,036	0,002	0,000	0,011	0,002		
No. 133938A	P	OSC2230351 16-525		42/002341	314	439	28	10,0	213,0	216,0	217,0	215,3	0
HEB 140		S275J0 +AR	1	12,10	0,09	0,64	0,19	0,014	0,0020	0,007	0,302	0,010	0,264
EN 10365		EN10025-2/EN10034	12	4.923	0,150	0,141	0,038	0,002	0,000	0,015	0,002		
No. 134058B	P	EX-OSC2230317		42/002251	306	447	33	10,0	208,0	190,0	202,0	200,0	0
UPN 200		S275J0 +AR	1	12,10	0,09	0,63	0,18	0,010	0,0050	0,004	0,440	0,009	0,273
EN 10365		EN10025-2/EN10279	18	5.544	0,112	0,157	0,053	0,002	0,000	0,021	0,001		
No. 132305A	P	OSC2230351 16-525		42/002341	360	473	31	7,5	150,0	149,0	156,0	151,7	0
HEA 100		S355J2 +AR	2	12,10	0,12	1,24	0,20	0,015	0,0030	0,027	0,426	0,010	0,409
EN 10365		EN 10025-2/EN10034	50	10.164	0,126	0,170	0,040	0,027	0,000	0,018	0,003		
No. 134243B	P	EX-OSC2230318		42/002252	372	540	30	7,5	55,0	72,0	58,0	61,7	- 20
HEA 120		S355J2 +AR	1	12,10	0,14	1,23	0,22	0,015	0,0030	0,025	0,388	0,009	0,413
EN 10365		EN 10025-2/EN10034	20	4.845	0,108	0,141	0,025	0,028	0,001	0,020	0,002		
No. 132260B	P	EX-OSC2230318		42/002252	398	541	29	7,5	108,0	102,0	105,0	105,0	- 20

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.l
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2022 DDT / PA/6249

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

02 N° 2022 DDT / PA/6249

671/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2022 DDT / PA/6249

672/ 3402

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2022 DDT / PA/6249

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi /*sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	S355 JR/J0/J2/K2	NPD		

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2022 DDT / PA/6249

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2022 DDT / PA/6249

674/ 3402

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320351
RIF. ORDINE: N. 1722001973.
DDT: 0000304208
PLACCA/COLATA: 70600

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNISIPRE s.p.a

Nr. / No.: 1450076864
Data / Date 23.05.2022

Adresa/Address: Via Principe di Udine 118, , 33031, CAMPOFORMIDO
Tara/State: Italy

Comanda nr. / Order no.: 1100645531

Vagon/Wagon / Auto/Truck:
DB18FIV/DB72FIV

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH [N/mm^2]	Rm [N/mm^2]	A5 [%]	Incovoiere prin soc / Charpy impact test					
											Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	70600	S355J2+M	HE140A	16	4.785	12100	-0 / +100	383	502	28,0	300/7,5	-20	118,0	122,0	114,0	118,0

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	70600	0,110	1,190	0,220	0,009	0,012	0,100	0,160	0,350	0,030	0,001	0,042	0,034	0,018	0,0004	0,0015	0,0090			0,377

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
FLORIN VIOREL DRAGOI

CE
12/1823

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320714
RIF. ORDINE: ORDINE 1722001973
DDT: 0000902397
PLACCA/COLATA: 61544

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

677/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022103
A07 Your Order No.: OSC2270343

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2105/8-2022**
Advice No. 800114849

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
1	61544	HE 280B	EN 10365	12.100 mm	4	5.050 kg
2	61530	HE 360B	EN 10365	12.100 mm	9	15.575 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
61530	0,08	0,18	1,42	0,019	0,024	0,010	0,014	0,040	0,007	0,08
61544	0,09	0,20	1,46	0,017	0,021	0,008	0,018	0,040	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
61530	0,28	0,15	0,03	0,023	0,37
61544	0,25	0,14	0,03	0,024	0,38

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_o}$ [%] C13 C14
max		630	
min	345	470	22,0
61530	407	513	34,0
61544	430	535	33,0

Z03 Works inspector
René Merbach

Z02 30.08.2022

Z04

CE

0769

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022103
A07 Your Order No.: OSC2270343

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2105/8-2022**
Advice No. 800114849

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
61530	KV 450	L	-20 °C	19 / 27	120	59	135	104
61544	KV 450	L	-20 °C	19 / 27	112	133	96	113

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 30.08.2022

Z04

CE

0769

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000320714
RIF. ORDINE: ORDINE 1722001973
DDT: 0000902397
PLACCA/COLATA: 61530

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

680/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

681/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022103
A07 Your Order No.: OSC2270343

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2105/8-2022**
Advice No. 800114849

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
1	61544	HE 280B	EN 10365	12.100 mm	4	5.050 kg
2	61530	HE 360B	EN 10365	12.100 mm	9	15.575 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
61530	0,08	0,18	1,42	0,019	0,024	0,010	0,014	0,040	0,007	0,08
61544	0,09	0,20	1,46	0,017	0,021	0,008	0,018	0,040	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
61530	0,28	0,15	0,03	0,023	0,37
61544	0,25	0,14	0,03	0,024	0,38

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
61530	407	513	34,0	
61544	430	535	33,0	

Z03 Works inspector
René Merbach

Z02 30.08.2022

Z04

CE

0769

6827 3402
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022103
A07 Your Order No.: OSC2270343

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2105/8-2022**
Advice No. 800114849

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
61530	KV 450	L	-20 °C	19 / 27	120	59	135	104
61544	KV 450	L	-20 °C	19 / 27	112	133	96	113

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 30.08.2022

Z04

CE

0769

032 CPR 2020-10-01 SWT

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723000863	123A40D	Q012301217

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **26.07.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300117 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH** Office: **Vienna**
voestalpine-Straße 3, 4020 Linz, Austria

Clients Order Number: **3500684** Date: **21-07-2023**

Order Status: **complete**

Inspection Dates
First: **12-07-2023** final: **12-07-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723000863 123A40C**

Description:

1 piece(s) of steel plate(s) **5961 kg** , as per attached inspection Certificate no.: **A0376574**

Specification

S355ML EN 10025-4:2019 + EN 10025-1:2004

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300117-3 K

Z02 Date 21-07-2023

A04 manufacturer's work symbol
voestalpine

A03 Document number	A0376574	A08 Order-No.:	3500684	A07 OrderDat.	23-05-2023	Date of dispatch	20-07-2023 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1723000863 123A40C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: hot rolled plates of structural steels

B02 Material: S355ML

B03 Standard: EN 10025-4:2019 + EN 10025-1:2004

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
RIGASSIFICATORE SNAM - DECK

B03 - Supplementary requirements
MATERIAL IS ACC. TO PO 123A40-MTO-ST-002 // MATERIAL IS ACCORDING TO EN10025-4 OPTIONS 1, 6 AND 7.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
758016	191257/1	80	25,00	2500,0	12000	1		5.961	85377	1PLATCS25049
		Sum				1		5.961		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
STEEL YOUR AHEAD.

Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %
Set values >=						.020										
Set values <=	.140	.500	1.600	.025	.0200		.300	.500	.100	.550	.100	.050	.050	.0150		.39
758016	.032	.320	1.370	.006	.0008	.052	.122	.015	.002	.013	.004	.026	.012	.0053	.0002	.29

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %
Set values >=							345	345	470		22.0
Set values <=									630		
758016	191257	30,0	25.40	F	O	T	521	520	538	A5	26.5

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Reh: Yield Strength
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
Set values >=						-40	50	50	50	50
Set values <=										
758016	190342	CV 10x10	F	ZB2	L	-40	299	330	355	328

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
ZB2: 2mm below surface
C02;Dir:
L: longitudinal
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
ONE STEP AHEAD.

CE

0769

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML

EN 10025-4:2019 + EN 10025-1:2004 S355ML

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Hopfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
CAST THE AHEAD.

UK CA

Pressure Equipment (Safety) Regulations 2016 No. 1105

0836 - Uni Karlsruhe BBA

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML

EN 10025-4:2019 + EN 10025-1:2004 S355ML

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
GOING STEEL AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA

26-JUL-2023

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
MARCEGAGLIA PLATES SPA	1723000952	123A40C	Q012301260

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

P. Ancarani — **28.08.2023**

Paolo Ancarani

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MARCEGAGLIA
PALINI E BERTOLI
Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 INSPECTION CERTIFICATE 3.2 EN10204:2004

A 03 Certificate Nr. 08LP23 | date 09/08/2023 | Page Nr. 1/2

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723000952 -123A40C
A 08 Marcegaglia P.O.: 1191637966
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020									IMPACT TEST - UNI EN ISO 148-1:2016								Z TEST - EN10164			
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43	Test apply: Z35			
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J	C 31 Z_1	C 31 Z_2	C 31 Z_3	C 32 Z_{AVG}
1	25F.192.01	30	2500	12000	629927	7,20	10802	FLAT	1	FT	T	RT	540	426		23,7	10 mm	1	P	L	-40	253	247	252	250,7	51,0	57,1	58,1	55,4
							10802										10 mm	1	P	L	-20	243	253	261	252,3				
2	25F.192.02	30	2500	12000	629927	7,20																							
3	25F.192.03	25	2850	12000	629927	6,84																							
4	25F.191.01	25	2850	12000	629928	6,84																							
5	25F.191.02	30	2500	12000	629928	7,20																							
6	25F.191.04	30	2500	12000	629928	7,20	10803	FLAT	1	FT	T	RT	528	394		30,6	10 mm	1	P	L	-40	188	206	217	203,7	62,0	67,1	47,0	58,7
							10803										10 mm	1	P	L	-20	238	199	184	207,0				
7	25F.190.02	30	2850	12000	629931	8,21	10805	FLAT	1	FT	T	RT	547	429		31,8	10 mm	1	P	L	-40	237	256	261	251,3	58,8	61,6	63,0	61,1
8	25F.170.01	30	2850	12000	678267	8,21	10806	FLAT	1	FT	T	RT	536	423		32,5	10 mm	1	P	L	-40	232	233	221	228,7	56,7	63,8	51,0	57,2
							10806										10 mm	1	P	L	-20	244	221	234	233,0				
9	25F.170.02	25	2850	12000	678267	6,84																							
10	25F.170.03	25	2850	12000	678267	6,84																							
11	25F.171.01	30	2850	12000	678267	8,21																							
12	25F.171.02	25	2850	12000	678267	6,84																							
13	25F.193.01	30	2850	12000	678268	8,21	10804	FLAT	1	FT	T	RT	541	428		31,8	10 mm	1	P	L	-40	242	249	266	252,3	56,2	65,2	47,7	56,4
14	25F.193.02	30	2850	12000	678268	8,21																							

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	629927	0,145	1,450	0,221	0,001	0,011	0,083	0,038	0,019	0,038	0,010	0,029	0,001	0,003	0,003	0,41
	629928	0,157	1,430	0,202	0,001	0,013	0,042	0,036	0,024	0,042	0,009	0,029	0,001	0,004	0,003	0,41
	629931	0,153	1,450	0,196	0,001	0,010	0,030	0,026	0,019	0,050	0,004	0,031	0,001	0,004	0,002	0,40
	678267	0,152	1,430	0,180	0,001	0,011	0,041	0,034	0,022	0,046	0,007	0,028	0,001	0,003	0,003	0,40
	678268	0,146	1,450	0,207	0,002	0,011	0,058	0,031	0,023	0,041	0,015	0,029	0,001	0,003	0,003	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				

Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
25F.192.01	30	2500	12000	629927	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.192.02	30	2500	12000	629927	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.192.03	25	2850	12000	629927	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.191.01	25	2850	12000	629928	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.191.02	30	2500	12000	629928	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.191.04	30	2500	12000	629928	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.190.02	30	2850	12000	629931	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.170.01	30	2850	12000	678267	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.170.02	25	2850	12000	678267	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.170.03	25	2850	12000	678267	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.171.01	30	2850	12000	678267	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.171.02	25	2850	12000	678267	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.193.01	30	2850	12000	678268	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.193.02	30	2850	12000	678268	EN 10160	S1E2	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 08LP23 | date 09/08/2023 | Page Nr. 2/2

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723000952 -123A40C
A 08 Marcegaglia P.O.: 1191637966
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2016									IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
15	25F.192.04	20	2500	12000	629927	4,80	10808	FLAT	1	FT	T	RT	538	432		31,5	10 mm	1	P	L	-20	261	270	259	263,3
16	25F.191.03	20	2500	12000	629928	4,80	10809	FLAT	1	FT	T	RT	558	472		30,0	10 mm	1	P	L	-20	235	250	248	244,3
17	25F.190.01	20	2500	12000	629931	4,80	10810	FLAT	1	FT	T	RT	549	447		32,3	10 mm	1	P	L	-20	264	266	277	269,0
18	25F.193.04	20	2500	12000	678268	4,80	10807	FLAT	1	FT	T	RT	535	436		30,0	10 mm	1	P	L	-20	227	269	256	250,7

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

	CHEMICAL COMPOSITION - Heat Analysis																Z 01		
C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85	Thickness Tollerance	Flatness	Surface Quality
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV			
	629927	0,145	1,450	0,221	0,001	0,011	0,083	0,038	0,019	0,038	0,010	0,029	0,001	0,003	0,003	0,41			
	629928	0,157	1,430	0,202	0,001	0,013	0,042	0,036	0,024	0,042	0,009	0,029	0,001	0,004	0,003	0,41			
	629931	0,153	1,450	0,196	0,001	0,010	0,030	0,026	0,019	0,050	0,004	0,031	0,001	0,004	0,002	0,40	acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3
	678268	0,146	1,450	0,207	0,002	0,011	0,058	0,031	0,023	0,041	0,015	0,029	0,001	0,003	0,003	0,41			

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
25F.192.04	20	2500	12000	629927	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.191.03	20	2500	12000	629928	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.190.01	20	2500	12000	629931	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
25F.193.04	20	2500	12000	678268	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

Remarks:
- Fully killed steel. Fine grain steel.
- According to SNAM specific no. 000-CA-E-17026 rev. 0
- CE Marking Certificate no. 0474-CPR-0033 last issued 2020-09-14 Rev.05
  Hot rolled products of structural steel in compliance with regulation no. 305/2011/EU dated 2011-03-09.
  DOP available on:
  www.marcegagliapaliniebertoli.it/wp-content/uploads/2019/12/indice.pdf.
- UKCA Marking Certificate N.1244-CPR-1051 last issued 21/10/2022.
  Hot rolled products of structural steels in compliance with the Construction
  Products Regulation 2011 (retained EU law EUR 305/2011).
  DOP available on https://www.quality.marcegaglia.com.
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- Code numbers according to EN10168:2004

CE 0474 — MARCEGAGLIA PALINI E BERTOLI — EN 10025-1 EN 10025-3

UKCA 1244 — MARCEGAGLIA PALINI E BERTOLI — EN 10025-1 EN 10025-3

Z 03 Inspection Body

BUREAU VERITAS ITALY — WITNESSED / RIVISTO REVIEWED — SURVEYOR A. GHERSINI — DATE 09/08/2023

Z 02 Quality Control

MARCEGAGLIA
Palini e Bertoli S.p.A.
Luca Paressutti
Quality Control

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MARCEGAGLIA PLATES SPA	1723000953	123A40C	Q012301223

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.07.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A 01

MARCEGAGLIA PLATES

Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	54ML210723_rev. 01	21/07/23	1/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA (RA)

A 07 Purchase order: 1723000953 123A40C
A 08 Marcegaglia P.O.: 1191637960
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3: 2019**
Steel grade : **1.0546 - S355NL**

B06 MARKINGS: according to EN10025-1:2005

DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

B 04 Delivery condition: +N Normalized in Furnace

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2020 / EN ISO 6892-2:2018								IMPACT TEST - EN ISO 148-1:2016									Z Test - EN 10164 - Z35			
ITEM	B 07 Plate Id Nr	B 09 Dimensions (mm)	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J	C 31 Z1 %	C 31 Z2 %	C 31 Z3 %	C 32 Mean Value Z %
1	23EG005415	15	2000	12000	2355309	2,83																							
2	23EG005416	15	2000	12000	2355309	2,83																							
3	23EG005427	15	2000	12000	2355309	2,83																							
4	23EG005434	15	2000	12000	2355309	2,83																							
5	23EG005436	15	2000	12000	2355309	2,83																							
6	23EG005615	15	2320	12000	2355309	3,28																							
7	23EG005624	15	2000	12000	2355309	2,83																							
8	23EG005625	15	2000	12000	2355309	2,83	5408	FLAT	1	P	T	RT	532	417		31,0	10 mm	1	P	L	-20	245	235	199	226				
9	23EG005424	20	2320	12000	2355309	4,37																							
10	23EG005499	20	2320	12000	2355309	4,37																							
11	23EG005501	20	2320	12000	2355309	4,37																							
12	23EG005627	20	2320	12000	2355309	4,37																							
13	23EG005600	25	2350	12000	2355309	5,53	5413	FLAT	1	P	T	RT	518	407		28,1	10 mm	1	P	L	-20	262	259	269	263	60	65	63	63
							5413										10 mm	1	P	L	-40	256	246	190	231				

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis / (*) *Product Analysis* (!)

C 00 Sample	B 07 Heat Nr	C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	2355309	0,16	1,44	0,24	0,002	0,013	0,01	0,01	0,01	0,050	0,002	0,028	0,001	0,002	0,004	0,40

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION (!)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE	FREQUENCY	ANGLE
1	23EG005415	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
2	23EG005416	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
3	23EG005427	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
4	23EG005434	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
5	23EG005436	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
6	23EG005615	15	2320	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
7	23EG005624	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
8	23EG005625	15	2000	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
9	23EG005424	20	2320	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
10	23EG005499	20	2320	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
11	23EG005501	20	2320	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
12	23EG005627	20	2320	12000	2355309	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
13	23EG005600	25	2350	12000	2355309	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°

Remarks:



Signature:
3° liv. EN ISO 9712:2012
M. Quargnali

Remarks:

- Heat treatment: temperature 910 +/- 10°C. Soaking time: 30 min/inc, cooling in still air.
- Fully killed steel. Fine grain steel.
- Mechanical tests performed at Marcegaglia Plates Lab. Test Report Nr. 23.054
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body

TÜV AUSTRIA ITALIA 029 ☑ Witnessed ☑ Reviewed (1)
Ing. M. Polichetti
21 LUG 2023

* reviewed for revision 01 on 27/07/2023 only about UT acceptance criteria typo.

Z 02 Quality Control
Q.M.D. M. QUARGNALI

MARCEGAGLIA PLATES
Michele Quargnali

696/ 3402

A 01

MARCEGAGLIA PLATES

Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 54ML210723_rev. 01 | date 21/07/23 | Page Nr. 2/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA (RA)

A 07 Purchase order: 1723000953 123A40C
A 08 Marcegaglia P.O.: 1191637960
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3: 2019**
Steel grade : **1.0546 - S355NL**

B06 MARKINGS: according to EN10025-1:2005

DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

B 04 Delivery condition: +N Normalized in Furnace

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08 ITEM	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2020 / EN ISO 6892-2:2018									IMPACT TEST - EN ISO 148-1:2016									Z Test - EN 10164 - Z35			
	B 07 Plate Id Nr	B 09 Dimensions (mm)	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J	C 31 Z1 %	C 31 Z2 %	C 31 Z3 %	C 32 Mean Value Z %
14	23EG005620	15	2320	12000	2355315	3,28	5414	FLAT	1	P	T	RT	530	428		31,6	10 mm	1	P	L	-20	241	231	245	239				
15	23EG005612	25	2200	12000	2355315	5,18																							
16	23EG005613	25	2200	12000	2355315	5,18	5416	FLAT	1	P	T	RT	524	408		30,1	10 mm	1	P	L	-40	200	223	266	230	58	62	59	60
17	23EG005395	15	2000	12000	2355344	2,83																							
18	23EG005403	15	2320	12000	2355344	3,28																							
19	23EG005405	15	2000	12000	2355344	2,83																							
20	23EG005429	15	2000	12000	2355344	2,83																							
21	23EG005431	15	2000	12000	2355344	2,83																							
22	23EG005562	15	2000	12000	2355344	2,83																							
23	23EG005617	15	2320	12000	2355344	3,28																							
24	23EG005621	15	2320	12000	2355344	3,28																							
25	23EG005622	15	2320	12000	2355344	3,28																							
26	23EG005628	15	2000	12000	2355344	2,83	5426	FLAT	1	P	T	RT	523	430		29,8	10 mm	1	P	L	-20	230	238	235	234				

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

C 00 Sample	B 07 Heat Nr	CHEMICAL COMPOSITION - Heat Analysis / (*) Product Analysis (|) C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	2355315	0,16	1,41	0,20	0,003	0,010	0,01	0,01	0,01	0,041	0,002	0,026	0,001	0,002	0,004	0,40
	2355344	0,16	1,46	0,19	0,005	0,008	0,02	0,01	0,02	0,043	0,002	0,028	0,001	0,002	0,005	0,41

Z 01 Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION (|)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE	FREQUENCY	ANGLE
14	23EG005620	15	2320	12000	2355315	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
15	23EG005612	25	2200	12000	2355315	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
16	23EG005613	25	2200	12000	2355315	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
17	23EG005395	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
18	23EG005403	15	2320	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
19	23EG005405	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
20	23EG005429	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
21	23EG005431	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
22	23EG005562	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
23	23EG005617	15	2320	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
24	23EG005621	15	2320	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
25	23EG005622	15	2320	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
26	23EG005628	15	2000	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°

Remarks:

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

Signature:
3° liv. EN ISO 9712:2012
M. Quargnali

Remarks:

- Heat treatment: temperature 910 +/- 10°C. Soaking time: 30 min/inc, cooling in still air.
- Fully killed steel. Fine grain steel.
- Mechanical tests performed at Marcegaglia Plates Lab. Test Report Nr. 23.054
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body

TÜV AUSTRIA ITALIA 029 ☒ Witnessed ☒ Reviewed (*)
Ing. M. Polichetti
21 LUG 2023

* reviewed for revision 01 on 27/07/2023 only about UT acceptance criteria typo.

Z 02 Quality Control
Q.M.D. M. QUARGNALI

MARCEGAGLIA PLATES
Michela Quargnali

MARCEGAGLIA PLATES
Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 03 Certificate Nr. 54ML210723_rev. 01 | date 21/07/23 | Page Nr. 3/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA (RA)

A 07 Purchase order: 1723000953 123A40C
A 08 Marcegaglia P.O.: 1191637960
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3: 2019
Steel grade : 1.0546 - S355NL

B06 MARKINGS: according to EN10025-1:2005

DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

B 04 Delivery condition: +N Normalized in Furnace

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08 ITEM	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2020 / EN ISO 6892-2:2018									IMPACT TEST - EN ISO 148-1:2016									Z Test - EN 10164 - Z35			
	B 07 Plate Id Nr	B 09 Dimensions (mm)	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J	C 31 Z1 %	C 31 Z2 %	C 31 Z3 %	C 32 Mean Value Z %
27	23EG005399	20	2320	12000	2355344	4,37																							
28	23EG005407	25	2350	12000	2355344	5,53																							
29	23EG005411	25	2200	12000	2355344	5,18																							
30	23EG005418	25	2200	12000	2355344	5,18																							
31	23EG005420	25	2200	12000	2355344	5,18																							
32	23EG005609	25	2200	12000	2355344	5,18																							
33	23EG005614	25	2200	12000	2355344	5,18																							
34	23EG005626	25	2200	12000	2355344	5,18	5434	FLAT	1	P	T	RT	518	401		29,0	10 mm	1	P	L	-20	261	253	254	256	57	56	56	56
							5434										10 mm	1	P	L	-40	182	248	255	228				

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis / (*) *Product Analysis* (1)

C 00 Sample	B 07 Heat Nr	C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	2355344	0,16	1,46	0,19	0,005	0,008	0,02	0,01	0,02	0,043	0,002	0,028	0,001	0,002	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION (1)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
27	23EG005399	20	2320	12000	2355344	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
28	23EG005407	25	2350	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
29	23EG005411	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
30	23EG005418	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
31	23EG005420	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
32	23EG005609	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
33	23EG005614	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
34	23EG005626	25	2200	12000	2355344	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°

Remarks:

0474
MARCEGAGLIA PLATES
EN 10025-1
EN 10025-3
1244
22
MARCEGAGLIA PLATES
EN 10025-1
EN 10025-3

Signature:
3° liv. EN ISO 9712:2012
M. Quargnali

Remarks:

- Heat treatment: temperature 910 +/- 10°C. Soaking time: 30 min/inc, cooling in still air.
- Fully killed steel. Fine grain steel.
- Mechanical tests performed at Marcegaglia Plates Lab. Test Report Nr. 23.054
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body

TÜV AUSTRIA ITALIA 029
☑ Witnessed ☑ Reviewed (1)
Ing. M. Polichetti
21 LUG 2023

* reviewed for revision 01 on 27/07/2023 only about UT acceptance criteria typo.

Z 02 Quality Control
Q.M.D. M. QUARGNALI
MARCEGAGLIA PLATES
Michele Quargnali

A 01

MARCEGAGLIA PLATES

Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 54ML210723_rev. 01 | date 21/07/23 | Page Nr. 4/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA (RA)

A 07 Purchase order: 1723000953 123A40C
A 08 Marcegaglia P.O.: 1191637960
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3: 2019**
Steel grade : **1.0546 - S355NL**

B06 MARKINGS: according to EN10025-1:2005

DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

B 04 Delivery condition: +N Normalized in Furnace

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08 ITEM	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2020 / EN ISO 6892-2:2018								IMPACT TEST - EN ISO 148-1:2016									Z Test - EN 10164 - Z35			
	B 07 Plate Id Nr	B 09 Dimensions (mm)	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	(2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J	C 31 Z1 %	C 31 Z2 %	C 31 Z3 %	C 32 Mean Value Z %
35	23EG005497	15	2000	12000	2355348	2,83	5435	FLAT	1	P	T	RT	515	406		30,7	10 mm	1	P	L	-20	223	256	205	228				
36	23EG005422	25	2200	12000	2355348	5,18	5436	FLAT	1	P	T	RT	515	397		28,5	10 mm	1	P	L	-40	224	231	224	226	53	62	65	60
37	23EG005413	15	2000	12000	2355351	2,83																							
38	23EG005430	15	2000	12000	2355351	2,83																							
39	23EG005433	15	2000	12000	2355351	2,83																							
40	23EG005557	15	2000	12000	2355351	2,83																							
41	23EG005558	15	2000	12000	2355351	2,83																							
42	23EG005561	15	2000	12000	2355351	2,83	5442	FLAT	1	P	T	RT	525	417		31,8	10 mm	1	P	L	-20	222	217	240	226				
43	23EG005401	20	2320	12000	2355351	4,37																							
44	23EG005397	25	2200	12000	2355351	5,18																							
45	23EG005409	25	2200	12000	2355351	5,18																							
46	23EG005432	25	2200	12000	2355351	5,18	5446	FLAT	1	P	T	RT	520	402		30,3	10 mm	1	P	L	-20	246	254	252	251	60	61	51	57
							5446										10 mm	1	P	L	-40	237	186	179	201				

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis / (*) *Product Analysis* (//)

C 00 Sample	B 07 Heat Nr	C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	2355348	0,16	1,42	0,17	0,005	0,011	0,02	0,01	0,02	0,035	0,001	0,026	0,003	0,002	0,004	0,40
	2355351	0,17	1,46	0,17	0,005	0,014	0,02	0,01	0,02	0,035	0,001	0,034	0,001	0,002	0,004	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION (//)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION	FREQUENCY	ANGLE
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION		

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
35	23EG005497	15	2000	12000	2355348	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
36	23EG005422	25	2200	12000	2355348	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
37	23EG005413	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
38	23EG005430	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
39	23EG005433	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
40	23EG005557	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
41	23EG005558	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
42	23EG005561	15	2000	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
43	23EG005401	20	2320	12000	2355351	EN 10160	S1E1	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
44	23EG005397	25	2200	12000	2355351	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
45	23EG005409	25	2200	12000	2355351	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°
46	23EG005432	25	2200	12000	2355351	EN 10160	S1E2	No record indication found	200 x 200 mm	50	BDD20/4	4 MHz	0°

Remarks:

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3
UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

Signature:
3° liv. EN ISO 9712:2012
M. Quargnali

Remarks:

- Heat treatment: temperature 910 +/- 10°C. Soaking time: 30 min/inc, cooling in still air.
- Fully killed steel. Fine grain steel.
- Mechanical tests performed at Marcegaglia Plates Lab. Test Report Nr. 23.054
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body

TÜV AUSTRIA ITALIA 029 ☑ Witnessed ☑ Reviewed (*)
Ing. M. Polichetti
21 LUG 2023

* reviewed for revision 01 on 27/07/2023 only about UT acceptance criteria typo.

Z 02 Quality Control
Q.M.D. M. QUARGNALI

MARCEGAGLIA PLATES
Michela Quargnali

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order n	job	Barcode
WAREHOUSE ROSETTI	1723001105	124A40	Q012301945

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emilia **26.03.2025**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	1/7

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020									IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
1	27F.77.01	30	2400	8950	23303241	5,16	13806	FLAT	1	FT	T	RT	561	442		29,3	10 mm	1	P	L	-40	182	206	200	196,0
																	10 mm	1	P	L	-20	191	212	207	203,3
2	27F.106.01	25	3000	12000	23303241	7,20																			
3	27F.106.02	25	3000	12000	23303241	7,20																			
4	27F.106.03	25	3000	12000	23303241	7,20																			
5	27F.65.04/A	25	2050	8800	23303242	3,61																			
6	27F.65.04/B	25	2050	8800	23303242	3,61																			
7	27F.65.05	20	3000	9400	23303242	4,51																			
8	27F.69.01/A	25	2050	8800	23303242	3,61	13801	FLAT	1	FT	T	RT	558	438		32,1	10 mm	1	P	L	-20	259	245	250	251,3
9	27F.69.01/B	25	2050	8800	23303242	3,61																			
10	27F.65.02	30	2400	8950	23303242	5,16																			
11	27F.65.03	30	2400	8950	23303242	5,16	13802	FLAT	1	FT	T	RT	556	428		30,0	10 mm	1	P	L	-40	254	258	251	254,3
12	27F.69.02	30	2400	8950	23303242	5,16																			
13	27F.69.03	30	2400	8950	23303242	5,16																			
14	27F.69.04	30	2400	8950	23303242	5,16																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N.	CEV
	23303241	0,160	1,510	0,200	0,002	0,014	0,050	0,030	0,040	0,029	0,010	0,027	0,003	0,002	0,005	0,43
	23303242	0,150	1,470	0,230	0,001	0,014	0,050	0,020	0,040	0,028	0,006	0,027	0,003	0,002	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02

ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.77.01	30	2400	8950	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.01	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.02	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.03	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.04/A	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.04/B	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.05	20	3000	9400	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.01/A	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.01/B	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.02	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.03	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.02	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.03	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.04	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	2/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace
B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
15	27F.176.01	25	3000	12000	23303244	7,20																			
16	27F.176.04	30	2400	8950	23303244	5,16	13807	FLAT	1	FT	T	RT	552	434		31,8	10 mm	1	P	L	-40	223	238	221	227,3
																	10 mm	1	P	L	-20	247	236	261	248,0
17	27F.75.01	30	2400	8950	23303244	5,16																			
18	27F.75.02	30	2400	8950	23303244	5,16																			
19	27F.75.03	30	2400	8950	23303244	5,16																			
20	27F.75.04	30	2400	8950	23303244	5,16																			
21	27F.71.01	30	2400	8950	23405103	5,16																			
22	27F.71.02	30	2400	8950	23405103	5,16																			
23	27F.71.03	30	2400	8950	23405103	5,16	13805	FLAT	1	FT	T	RT	542	434		30,6	10 mm	1	P	L	-40	221	232	218	223,7
24	27F.71.04	30	2400	8950	23405103	5,16																			
25	27F.61.01	30	2400	8950	23405116	5,16																			
26	27F.61.02	30	2400	8950	23405116	5,16	13809	FLAT	1	FT	T	RT	544	424		30,0	10 mm	1	P	L	-40	210	215	209	211,3
																	10 mm	1	P	L	-20	225	228	220	224,3
27	27F.61.05/A	25	2050	8800	23405116	3,61																			
28	27F.61.05/B	25	2050	8800	23405116	3,61																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23303244	0,160	1,480	0,200	0,002	0,014	0,050	0,020	0,040	0,025	0,007	0,026	0,003	0,002	0,005	0,42
	23405103	0,150	1,480	0,220	0,002	0,016	0,030	0,010	0,010	0,034	0,003	0,027	0,003	0,002	0,005	0,41
	23405116	0,150	1,440	0,220	0,001	0,020	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,005	0,40

Z 01		
Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions	Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.176.01	25 3000 12000	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.176.04	30 2400 8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.01	30 2400 8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.02	30 2400 8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.03	30 2400 8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.04	30 2400 8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.01	30 2400 8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.02	30 2400 8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.03	30 2400 8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.04	30 2400 8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.01	30 2400 8950	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.02	30 2400 8950	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.05/A	25 2050 8800	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.05/B	25 2050 8800	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI
Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	3/7

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
29	27F.68.01/A	25	2050	8800	23405128	3,61																		
30	27F.68.01/B	25	2050	8800	23405128	3,61																		
31	27F.68.02	30	2400	8950	23405128	5,16	13804	FLAT	1	FT	T	RT	552	426		30,0	10 mm	1	P	L	-40	218	240	195	217,7
																	10 mm	1	P	L	-20	222	236	240	232,7
32	27F.68.03	30	2400	8950	23405128	5,16																		
33	27F.68.04	30	2400	8950	23405128	5,16																		
34	27F.66.02	30	2400	8950	23405130	5,16																		
35	27F.66.03	30	2400	8950	23405130	5,16																		
36	27F.66.04/A	25	2050	8800	23405130	3,61																		
37	27F.66.04/B	25	2050	8800	23405130	3,61																		
38	27F.66.05	20	3000	9400	23405130	4,51																		
39	27F.74.01	30	2400	8950	23405130	5,16	13815	FLAT	1	FT	T	RT	542	425		31,8	10 mm	1	P	L	-40	232	222	227	227,0
																	10 mm	1	P	L	-20	243	230	214	229,0

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature. RT = Room Temperature.

	CHEMICAL COMPOSITION - Heat Analysis																	Z 01		
C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84		C 85	Thickness Tollerance	Flatness	Surface Quality
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N		CEV			
	23405128	0,160	1,480	0,200	0,002	0,014	0,040	0,020	0,010	0,024	0,003	0,027	0,003	0,002	0,005		0,42			
	23405130	0,150	1,430	0,180	0,002	0,015	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,006		0,40			
																		acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.68.01/A	25	2050	8800	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.01/B	25	2050	8800	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.02	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.03	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.04	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.02	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.03	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.04/A	25	2050	8800	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.04/B	25	2050	8800	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.05	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.01	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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PALINI E BERTOLI

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A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	4/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020									IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
40	27F.74.02	30	2400	8950	23405130	5,16																			
41	27F.74.03	30	2400	8950	23405130	5,16	13814	FLAT	1	FT	T	RT	549	433		31,2	10 mm	1	P	L	-40	226	230	203	219,7
																	10 mm	1	P	L	-20	217	218	230	221,7
42	27F.74.04	30	2400	8950	23405130	5,16																			
43	27F.107.01	20	3000	9400	23405130	4,51																			
44	27F.107.02	20	3000	9400	23405130	4,51																			
45	27F.107.03	20	3000	9400	23405130	4,51																			
46	27F.67.01	30	2400	8950	23405134	5,16	13803	FLAT	1	FT	T	RT	556	429		29,3	10 mm	1	P	L	-40	212	214	228	218,0
																	10 mm	1	P	L	-20	216	230	240	228,7
47	27F.67.02/A	25	2050	8800	23405134	3,61																			
48	27F.67.02/B	25	2050	8800	23405134	3,61																			
49	27F.67.03/A	25	2050	8800	23405134	3,61																			
50	27F.67.03/B	25	2050	8800	23405134	3,61																			
51	27F.67.04/A	25	2050	8800	23405134	3,61																			
52	27F.67.04/B	25	2050	8800	23405134	3,61																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

	CHEMICAL COMPOSITION - Heat Analysis																	Z 01		
C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84		C 85	Thickness Tollerance	Flatness	Surface Quality
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N		CEV			
	23405130	0,150	1,430	0,180	0,002	0,015	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,006		0,40			
	23405134	0,160	1,460	0,280	0,001	0,015	0,040	0,020	0,020	0,040	0,006	0,027	0,003	0,002	0,005		0,42	acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION			FREQUENCY	ANGLE
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.74.02	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.03	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.04	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.01	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.02	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.03	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.01	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.02/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.02/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.03/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.03/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.04/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.04/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 5/7
A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace
B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
53	27F.76.01	30	2400	8950	23405134	5,16																			
54	27F.76.02	30	2400	8950	23405134	5,16																			
55	27F.76.03	30	2400	8950	23405134	5,16																			
56	27F.76.05	30	2400	8950	23405134	5,16	13816	FLAT	1	FT	T	RT	558	446		30,6	10 mm	1	P	L	-40	229	228	239	232,0
																	10 mm	1	P	L	-20	257	235	246	246,0
57	27F.108.02	20	3000	9400	23405134	4,51																			
58	27F.73.01	30	2400	8950	23405136	5,16																			
59	27F.73.02	30	2400	8950	23405136	5,16																			
60	27F.73.03	30	2400	8950	23405136	5,16																			
61	27F.73.05	30	2400	8950	23405136	5,16	13813	FLAT	1	FT	T	RT	548	437		29,3	10 mm	1	P	L	-40	227	229	251	235,7
																	10 mm	1	P	L	-20	245	229	257	243,7
62	27F.120.01	20	3000	9400	23405136	4,51																			
63	27F.120.02	20	3000	9400	23405136	4,51																			
64	27F.120.03	20	3000	9400	23405136	4,51																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405134	0,160	1,460	0,280	0,001	0,015	0,040	0,020	0,020	0,040	0,006	0,027	0,003	0,002	0,005	0,42
	23405136	0,150	1,460	0,170	0,002	0,015	0,040	0,020	0,020	0,026	0,005	0,028	0,002	0,001	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.76.01	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.02	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.03	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.05	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.108.02	20	3000	9400	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.01	30	2400	8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.02	30	2400	8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.03	30	2400	8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.05	30	2400	8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.01	20	3000	9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.02	20	3000	9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.03	20	3000	9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 6/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product: Hot Rolled Heavy Plates

B 02 Norm: EN10025-3:2019
Steel grade: 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
65	27F.177.02/A	25	2050	8800	23405138	3,61																			
66	27F.177.02/B	25	2050	8800	23405138	3,61																			
67	27F.177.03/A	25	2050	8800	23405138	3,61																			
68	27F.177.03/B	25	2050	8800	23405138	3,61																			
69	27F.177.04	30	2400	8950	23405138	5,16	13808	FLAT	1	FT	T	RT	535	405		33,3	10 mm	1	P	L	-40	230	233	238	233,7
																	10 mm	1	P	L	-20	247	236	261	248,0
70	27F.62.01	30	2400	8950	23405145	5,16																			
71	27F.62.02	30	2400	8950	23405145	5,16	13810	FLAT	1	FT	T	RT	552	427		33,1	10 mm	1	P	L	-40	229	239	225	231,0
																	10 mm	1	P	L	-20	237	243	242	240,7
72	27F.62.03/A	25	2050	8800	23405145	3,61																			
73	27F.62.03/B	25	2050	8800	23405145	3,61																			
74	27F.62.04	20	3000	9400	23405145	4,51																			
75	27F.62.05	20	3000	9400	23405145	4,51																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

	CHEMICAL COMPOSITION - Heat Analysis															Z 01		
C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85	Thickness Tollerance	Flatness	Surface Quality
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV			
	23405138	0,140	1,460	0,210	0,002	0,018	0,040	0,010	0,010	0,029	0,004	0,027	0,003	0,002	0,005	0,39	acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3
	23405145	0,160	1,440	0,230	0,005	0,018	0,040	0,010	0,010	0,024	0,002	0,027	0,003	0,002	0,005	0,41			

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.177.02/A	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.02/B	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.03/A	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.03/B	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.04	30	2400	8950	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.01	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.02	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.03/A	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.03/B	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.04	20	3000	9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.05	20	3000	9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	7/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019

Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
76	27F.64.01	20	3000	9400	23405145	4,51																			
77	27F.64.02	30	2400	8950	23405145	5,16	13812	FLAT	1	FT	T	RT	546	425		29,3	10 mm	1	P	L	-40	207	172	210	196,3
																	10 mm	1	P	L	-20	200	204	201	201,7
78	27F.64.03	30	2400	8950	23405145	5,16																			
79	27F.64.04/A	25	2050	8800	23405145	3,61																			
80	27F.64.04/B	25	2050	8800	23405145	3,61																			
81	27F.63.03	30	2400	8950	23405205	5,16	13811	FLAT	1	FT	T	RT	541	420		31,2	10 mm	1	P	L	-40	225	237	248	236,7
																	10 mm	1	P	L	-20	234	219	235	229,3
82	27F.63.04	30	2400	8950	23405205	5,16																			
83	27F.63.05/A	25	2050	8800	23405205	3,61																			
84	27F.63.05/B	25	2050	8800	23405205	3,61																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405145	0,160	1,440	0,230	0,005	0,018	0,040	0,010	0,010	0,024	0,002	0,027	0,003	0,002	0,005	0,41
	23405205	0,150	1,410	0,210	0,002	0,016	0,040	0,010	0,010	0,029	0,002	0,025	0,003	0,002	0,005	0,40

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION			FREQUENCY	ANGLE
Id. Plate	Dimensions	Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.64.01	20 3000 9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.02	30 2400 8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.03	30 2400 8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.04/A	25 2050 8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.04/B	25 2050 8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.03	30 2400 8950	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.04	30 2400 8950	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.05/A	25 2050 8800	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.05/B	25 2050 8800	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Remarks:
- Fully killed steel. Fine grain steel.
- According to SNAM specific no. 000-CA-E-17026 rev. 0
- CE Marking Certificate no. 0474-CPR-0033 last issued 2020-09-14 Rev.05
  Hot rolled products of structural steel in compliance with regulation no. 305/2011/EU dated 2011-03-09.
  DOP available on:
  www.marcegagliapaliniebertoli.it/wp-content/uploads/2019/12/indice.pdf.
- UKCA Marking Certificate N.1244-CPR-1051 last issued 21/10/2022.
  Hot rolled products of structural steels in compliance with the Construction
  Products Regulation 2011 (retained EU law EUR 305/2011).
  DOP available on https://www.quality.marcegaglia.com.
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- Code numbers according to EN10168:2004

CE 0474 04 MARCEGAGLIA PALINI E BERTOLI v. Enrico Fermi,28 33058 S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

UKCA 1244 22 MARCEGAGLIA PALINI E BERTOLI v. Enrico Fermi, 28 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

Z 03 Inspection Body

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR A. GHERSINI DATE 17/10/2023

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

Z 02 Quality Control

MARCEGAGLIA Palini e Bertoli S.p.A. Luca Petessutti Quality Control

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MARCEGAGLIA PALINI E BERTOLI SPA	1723001105	123A40D	Q012301428

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 18.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 1/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: **+N Normalized**

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
1	27F.77.01	30	2400	8950	23303241	5,16	13806	FLAT	1	FT	T	RT	561	442		29,3	10 mm	1	P	L	-40	182	206	200	196,0
																	10 mm	1	P	L	-20	191	212	207	203,3
2	27F.106.01	25	3000	12000	23303241	7,20																			
3	27F.106.02	25	3000	12000	23303241	7,20																			
4	27F.106.03	25	3000	12000	23303241	7,20																			
5	27F.65.04/A	25	2050	8800	23303242	3,61																			
6	27F.65.04/B	25	2050	8800	23303242	3,61																			
7	27F.65.05	20	3000	9400	23303242	4,51																			
8	27F.69.01/A	25	2050	8800	23303242	3,61	13801	FLAT	1	FT	T	RT	558	438		32,1	10 mm	1	P	L	-20	259	245	250	251,3
9	27F.69.01/B	25	2050	8800	23303242	3,61																			
10	27F.65.02	30	2400	8950	23303242	5,16																			
11	27F.65.03	30	2400	8950	23303242	5,16	13802	FLAT	1	FT	T	RT	556	428		30,0	10 mm	1	P	L	-40	254	258	251	254,3
12	27F.69.02	30	2400	8950	23303242	5,16																			
13	27F.69.03	30	2400	8950	23303242	5,16																			
14	27F.69.04	30	2400	8950	23303242	5,16																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N.	CEV
	23303241	0,160	1,510	0,200	0,002	0,014	0,050	0,030	0,040	0,029	0,010	0,027	0,003	0,002	0,005	0,43
	23303242	0,150	1,470	0,230	0,001	0,014	0,050	0,020	0,040	0,028	0,006	0,027	0,003	0,002	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				

Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.77.01	30	2400	8950	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.01	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.02	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.106.03	25	3000	12000	23303241	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.04/A	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.04/B	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.05	20	3000	9400	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.01/A	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.01/B	25	2050	8800	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.02	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.65.03	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.02	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.03	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.69.04	30	2400	8950	23303242	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

709/ 3402

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 2/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
15	27F.176.01	25	3000	12000	23303244	7,20																			
16	27F.176.04	30	2400	8950	23303244	5,16	13807	FLAT	1	FT	T	RT	552	434		31,8	10 mm	1	P	L	-40	223	238	221	227,3
																	10 mm	1	P	L	-20	247	236	261	248,0
17	27F.75.01	30	2400	8950	23303244	5,16																			
18	27F.75.02	30	2400	8950	23303244	5,16																			
19	27F.75.03	30	2400	8950	23303244	5,16																			
20	27F.75.04	30	2400	8950	23303244	5,16																			
21	27F.71.01	30	2400	8950	23405103	5,16																			
22	27F.71.02	30	2400	8950	23405103	5,16																			
23	27F.71.03	30	2400	8950	23405103	5,16	13805	FLAT	1	FT	T	RT	542	434		30,6	10 mm	1	P	L	-40	221	232	218	223,7
24	27F.71.04	30	2400	8950	23405103	5,16																			
25	27F.61.01	30	2400	8950	23405116	5,16																			
26	27F.61.02	30	2400	8950	23405116	5,16	13809	FLAT	1	FT	T	RT	544	424		30,0	10 mm	1	P	L	-40	210	215	209	211,3
																	10 mm	1	P	L	-20	225	228	220	224,3
27	27F.61.05/A	25	2050	8800	23405116	3,61																			
28	27F.61.05/B	25	2050	8800	23405116	3,61																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23303244	0,160	1,480	0,200	0,002	0,014	0,050	0,020	0,040	0,025	0,007	0,026	0,003	0,002	0,005	0,42
	23405103	0,150	1,480	0,220	0,002	0,016	0,030	0,010	0,010	0,034	0,003	0,027	0,003	0,002	0,005	0,41
	23405116	0,150	1,440	0,220	0,001	0,020	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,005	0,40

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				

Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
27F.176.01	25	3000	12000	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.176.04	30	2400	8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.01	30	2400	8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.02	30	2400	8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.03	30	2400	8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.75.04	30	2400	8950	23303244	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.01	30	2400	8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.02	30	2400	8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.03	30	2400	8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.71.04	30	2400	8950	23405103	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.01	30	2400	8950	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.02	30	2400	8950	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.05/A	25	2050	8800	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.61.05/B	25	2050	8800	23405116	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 3/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
29	27F.68.01/A	25	2050	8800	23405128	3,61																			
30	27F.68.01/B	25	2050	8800	23405128	3,61																			
31	27F.68.02	30	2400	8950	23405128	5,16	13804	FLAT	1	FT	T	RT	552	426		30,0	10 mm	1	P	L	-40	218	240	195	217,7
																	10 mm	1	P	L	-20	222	236	240	232,7
32	27F.68.03	30	2400	8950	23405128	5,16																			
33	27F.68.04	30	2400	8950	23405128	5,16																			
34	27F.66.02	30	2400	8950	23405130	5,16																			
35	27F.66.03	30	2400	8950	23405130	5,16																			
36	27F.66.04/A	25	2050	8800	23405130	3,61																			
37	27F.66.04/B	25	2050	8800	23405130	3,61																			
38	27F.66.05	20	3000	9400	23405130	4,51																			
39	27F.74.01	30	2400	8950	23405130	5,16	13815	FLAT	1	FT	T	RT	542	425		31,8	10 mm	1	P	L	-40	232	222	227	227,0
																	10 mm	1	P	L	-20	243	230	214	229,0

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature. RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405128	0,160	1,480	0,200	0,002	0,014	0,040	0,020	0,010	0,024	0,003	0,027	0,003	0,002	0,005	0,42
	23405130	0,150	1,430	0,180	0,002	0,015	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,006	0,40

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.68.01/A	25	2050	8800	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.01/B	25	2050	8800	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.02	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.03	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.68.04	30	2400	8950	23405128	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.02	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.03	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.04/A	25	2050	8800	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.04/B	25	2050	8800	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.66.05	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.01	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 4/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : **Hot Rolled Heavy Plates**

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
40	27F.74.02	30	2400	8950	23405130	5,16																			
41	27F.74.03	30	2400	8950	23405130	5,16	13814	FLAT	1	FT	T	RT	549	433		31,2	10 mm	1	P	L	-40	226	230	203	219,7
																	10 mm	1	P	L	-20	217	218	230	221,7
42	27F.74.04	30	2400	8950	23405130	5,16																			
43	27F.107.01	20	3000	9400	23405130	4,51																			
44	27F.107.02	20	3000	9400	23405130	4,51																			
45	27F.107.03	20	3000	9400	23405130	4,51																			
46	27F.67.01	30	2400	8950	23405134	5,16	13803	FLAT	1	FT	T	RT	556	429		29,3	10 mm	1	P	L	-40	212	214	228	218,0
																	10 mm	1	P	L	-20	216	230	240	228,7
47	27F.67.02/A	25	2050	8800	23405134	3,61																			
48	27F.67.02/B	25	2050	8800	23405134	3,61																			
49	27F.67.03/A	25	2050	8800	23405134	3,61																			
50	27F.67.03/B	25	2050	8800	23405134	3,61																			
51	27F.67.04/A	25	2050	8800	23405134	3,61																			
52	27F.67.04/B	25	2050	8800	23405134	3,61																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405130	0,150	1,430	0,180	0,002	0,015	0,040	0,010	0,010	0,026	0,003	0,026	0,003	0,002	0,006	0,40
	23405134	0,160	1,460	0,280	0,001	0,015	0,040	0,020	0,020	0,040	0,006	0,027	0,003	0,002	0,005	0,42

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

B 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION			FREQUENCY	ANGLE

Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.74.02	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.03	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.74.04	30	2400	8950	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.01	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.02	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.107.03	20	3000	9400	23405130	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.01	30	2400	8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.02/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.02/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.03/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.03/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.04/A	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.67.04/B	25	2050	8800	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03 Certificate Nr. 12LP23 | date 17/10/2023 | Page Nr. 5/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019
Steel grade : 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
53	27F.76.01	30	2400	8950	23405134	5,16																			
54	27F.76.02	30	2400	8950	23405134	5,16																			
55	27F.76.03	30	2400	8950	23405134	5,16																			
56	27F.76.05	30	2400	8950	23405134	5,16	13816	FLAT	1	FT	T	RT	558	446		30,6	10 mm	1	P	L	-40	229	228	239	232,0
																	10 mm	1	P	L	-20	257	235	246	246,0
57	27F.108.02	20	3000	9400	23405134	4,51																			
58	27F.73.01	30	2400	8950	23405136	5,16																			
59	27F.73.02	30	2400	8950	23405136	5,16																			
60	27F.73.03	30	2400	8950	23405136	5,16																			
61	27F.73.05	30	2400	8950	23405136	5,16	13813	FLAT	1	FT	T	RT	548	437		29,3	10 mm	1	P	L	-40	227	229	251	235,7
																	10 mm	1	P	L	-20	245	229	257	243,7
62	27F.120.01	20	3000	9400	23405136	4,51																			
63	27F.120.02	20	3000	9400	23405136	4,51																			
64	27F.120.03	20	3000	9400	23405136	4,51																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405134	0,160	1,460	0,280	0,001	0,015	0,040	0,020	0,020	0,040	0,006	0,027	0,003	0,002	0,005	0,42
	23405136	0,150	1,460	0,170	0,002	0,015	0,040	0,020	0,020	0,026	0,005	0,028	0,002	0,001	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions	Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.76.01	30 2400 8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.02	30 2400 8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.03	30 2400 8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.76.05	30 2400 8950	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.108.02	20 3000 9400	23405134	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.01	30 2400 8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.02	30 2400 8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.03	30 2400 8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.73.05	30 2400 8950	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.01	20 3000 9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.02	20 3000 9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.120.03	20 3000 9400	23405136	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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PALINI E BERTOLI

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Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	6/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: **+N Normalized**

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
65	27F.177.02/A	25	2050	8800	23405138	3,61																			
66	27F.177.02/B	25	2050	8800	23405138	3,61																			
67	27F.177.03/A	25	2050	8800	23405138	3,61																			
68	27F.177.03/B	25	2050	8800	23405138	3,61																			
69	27F.177.04	30	2400	8950	23405138	5,16	13808	FLAT	1	FT	T	RT	535	405		33,3	10 mm	1	P	L	-40	230	233	238	233,7
																	10 mm	1	P	L	-20	247	236	261	248,0
70	27F.62.01	30	2400	8950	23405145	5,16																			
71	27F.62.02	30	2400	8950	23405145	5,16	13810	FLAT	1	FT	T	RT	552	427		33,1	10 mm	1	P	L	-40	229	239	225	231,0
																	10 mm	1	P	L	-20	237	243	242	240,7
72	27F.62.03/A	25	2050	8800	23405145	3,61																			
73	27F.62.03/B	25	2050	8800	23405145	3,61																			
74	27F.62.04	20	3000	9400	23405145	4,51																			
75	27F.62.05	20	3000	9400	23405145	4,51																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405138	0,140	1,460	0,210	0,002	0,018	0,040	0,010	0,010	0,029	0,004	0,027	0,003	0,002	0,005	0,39
	23405145	0,160	1,440	0,230	0,005	0,018	0,040	0,010	0,010	0,024	0,002	0,027	0,003	0,002	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.177.02/A	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.02/B	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.03/A	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.03/B	25	2050	8800	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.177.04	30	2400	8950	23405138	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.01	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.02	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.03/A	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.03/B	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.04	20	3000	9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.62.05	20	3000	9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

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Tel +39 0431 623 111 Fax +39 0431 621 244

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 03	Certificate Nr.	date	Page Nr.
	12LP23	17/10/2023	7/7

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105
A 08 Marcegaglia P.O.: 1191647690 / 1191647694 / 1191647700 ,
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : **EN10025-3:2019**
Steel grade : **1.0546 - S355NL**

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: **+N Normalized**

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION							TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
76	27F.64.01	20	3000	9400	23405145	4,51																		
77	27F.64.02	30	2400	8950	23405145	5,16	13812	FLAT	1	FT	T	RT	546	425		29,3	10 mm	1	P	L	-40	207	172	210	196,3
																	10 mm	1	P	L	-20	200	204	201	201,7
78	27F.64.03	30	2400	8950	23405145	5,16																		
79	27F.64.04/A	25	2050	8800	23405145	3,61																		
80	27F.64.04/B	25	2050	8800	23405145	3,61																		
81	27F.63.03	30	2400	8950	23405205	5,16	13811	FLAT	1	FT	T	RT	541	420		31,2	10 mm	1	P	L	-40	225	237	248	236,7
																	10 mm	1	P	L	-20	234	219	235	229,3
82	27F.63.04	30	2400	8950	23405205	5,16																		
83	27F.63.05/A	25	2050	8800	23405205	3,61																		
84	27F.63.05/B	25	2050	8800	23405205	3,61																		

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

	CHEMICAL COMPOSITION - Heat Analysis																Z 01		
C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85	Thickness Tollerance	Flatness	Surface Quality
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV			
	23405145	0,160	1,440	0,230	0,005	0,018	0,040	0,010	0,010	0,024	0,002	0,027	0,003	0,002	0,005	0,41	acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3
	23405205	0,150	1,410	0,210	0,002	0,016	0,040	0,010	0,010	0,029	0,002	0,025	0,003	0,002	0,005	0,40			

D 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.64.01	20	3000	9400	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.02	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.03	30	2400	8950	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.04/A	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.64.04/B	25	2050	8800	23405145	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.03	30	2400	8950	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.04	30	2400	8950	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.05/A	25	2050	8800	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.63.05/B	25	2050	8800	23405205	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

Remarks:
- Fully killed steel. Fine grain steel.
- According to SNAM specific no. 000-CA-E-17026 rev. 0
- CE Marking Certificate no. 0474-CPR-0033 last issued 2020-09-14 Rev.05
  Hot rolled products of structural steel in compliance with regulation no. 305/2011/EU dated 2011-03-09.
  DOP available on:
  www.marcegagliapalinibertoli.it/wp-content/uploads/2019/12/indice.pdf.
- UKCA Marking Certificate N.1244-CPR-1051 last issued 21/10/2022.
  Hot rolled products of structural steels in compliance with the Construction
  Products Regulation 2011 (retained EU law EUR 305/2011).
  DOP available on https://www.quality.marcegaglia.com.
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- Code numbers according to EN10168:2004

CE 0474 — MARCEGAGLIA PALINI E BERTOLI — EN 10025-1 EN 10025-3

UKCA 1244 — MARCEGAGLIA — EN 10025-1 EN 10025-3

Z 03 Inspection Body

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR A. GHERSINI
DATE 17/10/2023

Z 02 Quality Control

MARCEGAGLIA
Palini e Bertoli S.p.A.
Luca Petessutti
Quality Control

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MARCEGAGLIA PALINI E BERTOLI SPA	1723001105	123A40D	Q012301601

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **23.11.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A 01

MARCEGAGLIA
PALINI E BERTOLI

V.le E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 03 Certificate Nr. 13LP23 Rev.01 | date 23/11/2023 | Page Nr. 1/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723001105 / 1723000967-123A408
A 08 Marcegaglia P.O.: 1191640427 -1191647690 - 1191647700 of
Delivery Nr.:
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019

Steel grade : 1.0546 - S355NL

C 79 Steelmaking process: BOF = basic oxigen furnace

B 04 **Delivery condition: +N Normalized**

B05 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean value
1	24C.15.01	40	3000	10400	2368217	9,98	15920	ROUND	T	1/4	T	RT	550	440		36,1	10 mm	T	1/4	L	-40	195	198	199	197,3
2	24C.15.03	40	3000	10400	2368217	9,98																			
3	24C.19.03	40	3000	10400	2368217	9,98																			
4	24C.27.02	40	3000	10400	2368217	9,98	15924	ROUND	T	1/4	T	RT	542	416		35,6	10 mm	T	1/4	L	-40	196	197	184	190,7
5	24C.27.03	40	3000	10400	2368217	9,98																			
6	24C.30.01	40	3000	10400	2368217	9,98																			
7	24C.30.02	40	3000	10400	2368217	9,98																			
8	24C.14.01	40	3000	10400	2638222	9,98	15923	ROUND	T	1/4	T	RT	545	442		34,3	10 mm	T	1/4	L	-40	162	213	217	197,3
9	24C.14.03	40	3000	10400	2368222	9,98																			
10	24C.22.03	40	3000	10400	2368222	9,98																			
11	24C.23.01	40	3000	10400	2368222	9,98																			
12	24C.23.02	40	3000	10400	2368222	9,98																			
13	24C.28.01	40	3000	10400	2368222	9,98																			
14	24C.28.03	40	3000	10400	2368222	9,98	15922	ROUND	T	1/4	T	RT	544	421		36,7	10 mm	T	1/4	L	-40	173	148	86	135,7

(1) LOCATION: T=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION: L=longitudinal; T= Transverse (4) Test temperature. RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	2368217	0,162	1,438	0,206	0,002	0,009	0,016	0,007	0,015	0,043	0,001	0,029	0,001	0,002	0,004	0,41
	2638222	0,161	1,425	0,185	0,002	0,013	0,015	0,007	0,013	0,046	0,001	0,027	0,001	0,002	0,004	0,40

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B2

B 02

ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION			FREQUENCY	ANGLE
GILARDONI RDS 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
24C.15.01	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.15.03	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.19.03	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.27.02	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.27.03	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.30.01	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.30.02	40	3000	10400	2368217	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.14.01	40	3000	10400	2638222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.14.03	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.22.03	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.23.01	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.23.02	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.28.01	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.28.03	40	3000	10400	2368222	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 05 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 03	Certificate Nr. 13LP23	date 23/11/2023	Page Nr 2/4
A 07	Purchase order:	1723001105 / 1723000967-123A408	
A 08	Marcegaglia P.O.:	1191640427 -1191647690 - 1191647700	
	Delivery Nr.:	of	
	Delivery Note Nr.:		

B 01 Product : Hot Rolled Heavy Plates

B 02 Norm : EN10025-3:2019

Steel grade : 1.0546 - S355NL

C 79 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS. acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr.

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016								
	B 07	B 09	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 11	C 13	C 41	C 01		C 02	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	F %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean value J
15	24C.16.01	40	3000	10400	2368230	9,98	15919	ROUND	1	1/4	T	RT	538	407		33,3	10 mm	1	1/4	L	-40	164	152	173	163,0
16	24C.20.02	40	3000	10400	2368230	9,98																			
17	24C.20.03	40	3000	10400	2368230	9,98																			
18	24C.21.01	40	3000	10400	2368230	9,98																			
19	24C.21.03	40	3000	10400	2368230	9,98																			
20	24C.29.02	40	3000	10400	2368230	9,98																			
21	24C.29.03	40	3000	10400	2368230	9,98	15921	ROUND	1	1/4	T	RT	534	417		34,6	10 mm	1	1/4	L	-40	54	98	224	92,0
22	27F.53.01	40	3000	5200	23303297	4,99																			
23	27F.53.02	40	3000	5200	23303297	4,99																			
24	27F.53.03	40	3000	5200	23303297	4,99																			
25	27F.53.04	40	3000	5200	23303297	4,99																			
26	27F.56.01	40	3000	5200	23303297	4,99																			
27	27F.56.02	40	3000	5200	23303297	4,99																			
28	27F.60.01	40	3000	10900	23303297	10,46	15926	ROUND	1	1/4	T	RT	557	428		30,1	10 mm	1	1/4	L	-40	205	158	167	176,7

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness; F=full thickness. (3) DIRECTION: L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	2368230	0,153	1,434	0,192	0,004	0,011	0,030	0,015	0,031	0,460	0,001	0,027	0,001	0,002	0,004	0,40
	23303297	0,150	1,480	0,220	0,001	0,013	0,050	0,020	0,050	0,034	0,004	0,027	0,003	0,002	0,005	0,41

Z 01

Thickness Tolerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

D 02 ULTRASONIC EXAMINATION

Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
INSTRUMENT: MAKE and MODEL					SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GILARDONI RDG 2000					AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION				
24C.16.01	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.20.02	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.20.03	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.21.01	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.21.03	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.29.02	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
24C.29.03	40	3000	10400	2368230	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.53.01	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.53.02	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.53.03	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.53.04	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.56.01	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.56.02	40	3000	5200	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.60.01	40	3000	10900	23303297	EN 10160	S1E1	No recordable indication found	200 x 200 mm	50	DP25/2	2 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel +39 0431 623 111 Fax +39 0431 621 244

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 02

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 03 Certificate Nr: 13LP23 | date: 28/11/2023 | Page Nr.: 3/4
A 07 Purchase order: 1723001105 / 172300096/-123A40R
A 08 Marcegaglia P.O.: 1191640427-119164/680 - 1191647700
Delivery Nr.: | of
Delivery Note Nr.:

B 01 Product: Hot Rolled Heavy Plates

B 02 Norm: EN10025-3:2019

Steel grade 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019

DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020								IMPACT TEST - UNI EN ISO 148-1:2016									
	B 07	B 08	B 10	B 11	B 07	B 12	C 00	C 10	C 01		C 02	C 03	C 12	C 11	C 13	C 41	C 01		C 07	C 03	C 42	C 42	C 42	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0,2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Values
29	27F.52.01	40	3000	10900	23405120	10,46	15927	ROUND	1	1/4	T	RT	550	431		33,7	10 mm	1	1/4	L	-40	208	180	176	188,0
																	10 mm	1	1/4	L	-20	239	216	212	222,3
30	27F.52.02/A	25	2050	9900	23405120	4,06																		
31	27F.52.02/B	25	2050	9900	23405120	4,06																		
32	27F.52.03/A	25	2050	9900	23405120	4,06																		
33	27F.52.03/B	25	2050	9900	23405120	4,06																		
34	27F.54.01	40	3000	5200	23405120	4,99																		
35	27F.54.02	40	3000	5200	23405120	4,99																		
36	27F.54.03	40	3000	5200	23405120	4,99																		
37	27F.54.05	40	3000	5200	23405120	4,99																		
38	27F.55.01	40	3000	5200	23405120	4,99																		
39	27F.55.02	40	3000	5200	23405120	4,99																		
40	27F.55.03	40	3000	5200	23405120	4,99																		
41	27F.55.04	40	3000	5200	23405120	4,99																		
42	27F.57.01	40	3000	5200	23405120	4,99	15927	ROUND	1	1/4	T	RT	553	416		32,6	10 mm	1	1/4	L	-40	122	174	165	153,7

(1) LOCATION: 1=Top 2= Bottom. (2) LOCATION: 1/2=1/2 thickness, F=surface; 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION: L=longitudinal; T= Transverse (4) Test temperature, RT = room Temperature.

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405120	0,160	1,490	0,230	0,001	0,020	0,030	0,020	0,030	0,031	0,003	0,026	0,003	0,002	0,005	0,42

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.B	acc. To EN 10029 cl N	acc. To EN 10163 cl. B5

D 02

ULTRASONIC EXAMINATION

INSTRUMENT, MAKE and MODEL				SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GTARDONI RDG 2000				AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION			FREQUENCY	ANGLE
Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE		
27F.52.01	40	3000	10900	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.52.02/A	25	2050	9900	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.52.02/B	25	2050	9900	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.52.03/A	25	2050	9900	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.52.03/B	25	2050	9900	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.54.01	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.54.02	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.54.03	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.54.05	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.55.01	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.55.02	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.55.03	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.55.04	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.57.01	40	3000	5200	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

A 01

MARCEGAGLIA
PALINI E BERTOLI

Via E. Fermi, 28 - 33058 San Giorgio di Nogaro (UD), Italy
Tel. +39 0431 523 111 Fax +39 0431 621 244

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 03 Certificate Nr.: 13LP23 | date: 23/11/2023 | Page Nr: 4/4

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA I

A 07 Purchase order: 1723091105 / 1725200967-1-3A-405
A 08 Marcegaglia P.O.: 1191640427 - 1191647690 - 1191647700
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product: Hot Rolled Heavy Plates

B 02 Norm: EN10025-3:2019
Steel grade: 1.0546 - S355NL

C 70 Steelmaking process: BOF = basic oxigen furnace

B 04 Delivery condition: +N Normalized

B06 MARKINGS: acc. To EN 10025-1:2019
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

	DESCRIPTION						TENSILE TEST - UNI EN ISO 6892-1:2020									IMPACT TEST - UNI EN ISO 148-1:2016							
	B 07	B 09	B 10	B 11	B 02	B 12	C 09	C 10	C 01		C 02	C 04	C 12	C 13	C 11	C 15	C 41	C 01		C 02	C 03	C 42	C 42	C 43	C 43
prog	Plate Id Nr	Dimensions (mm)			Heat Nr	Weight Ton	Sample	Shape	(1)	(2)	(3)	(4)	Rm Mpa	ReH Mpa	Rp 0.2 Mpa	E %	Width	(1)	(2)	(3)	(4) °C	Kv J	Kv J	Kv J	Mean Value J
43	27F.58.01	40	3000	10400	23405120	9,98	15925	ROUND	1	1/4	T	RT	549	433		35,0	10 mm	1	1/4	L	-40	209	189	176	189,0
44	27F.58.02	40	3000	10400	23405120	9,98																			
45	27F.59.01	40	3000	10400	23405120	9,98																			
46	27F.59.02	40	3000	10400	23405120	9,98																			
47	27F.51.02/A	25	2050	9900	23405142	4,06	15918	FLAT	1	FT	T	RT	552	430		32,4	10 mm	1	P	L	-20	249	228	237	238,0
48	27F.51.02/B	25	2050	9900	23405142	4,06																			
49	27F.51.03/A	25	2050	9900	23405142	4,06																			
50	27F.51.03/B	25	2050	9900	23405142	4,06																			

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; Pesurface: 1/4=1/4 thickness; FT=full thickness. (3) DIRECTION: L=longitudinal, T= Transverse. (4) Test temperature, RT = Room Temperature

CHEMICAL COMPOSITION - Heat Analysis

C 00	B 07	C 71	C 72	C 73	C 74	C 75	C 76	C 77	C 78	C 79	C 80	C 81	C 82	C 83	C 84	C 85
Sample	Heat Nr	C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	Nb	V	Ti	N	CEV
	23405120	0,160	1,490	0,230	0,001	0,020	0,030	0,020	0,010	0,031	0,003	0,026	0,003	0,002	0,005	0,42
	23405142	0,150	1,520	0,250	0,002	0,014	0,030	0,020	0,020	0,030	0,005	0,026	0,003	0,002	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 cl.8	acc. To EN 10029 cl.N	acc. To EN 10163 cl. B3

B 02 ULTRASONIC EXAMINATION

INSTRUMENT: MAKE and MODEL	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION				
GILARDONI RDG 2000	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION			FREQUENCY	ANGLE
Id. Plate	Dimensions	Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Edges	PROBE		
27F.58.01	40 3000 10400	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.58.02	40 3000 10400	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.59.01	40 3000 10400	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.59.02	40 3000 10400	23405120	EN 10160	S1E1	No record indication found	200 x 200 mm	50	DP25/2	2 MHz	0°
27F.51.02/A	25 2050 9900	23405142	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.51.02/B	25 2050 9900	23405142	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.51.03/A	25 2050 9900	23405142	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°
27F.51.03/B	25 2050 9900	23405142	EN 10160	S1E1	No record indication found	200 x 200 mm	50	SD25/4	4 MHz	0°

Signature:
LEVEL 2 EN ISO 9712:2012
M. Tomasin

Remarks:
Fully killed steel. Fine grain steel.
- According to SNAM specific no. 000-CA-E-17026 rev. 0
- CE Marking Certificate no. 0474-CPR-0033 last issued 2020-09-14 Rev 05
Hot rolled products of structural steel in compliance with regulation no. 305/2011/EU dated 2011-06-09
DOP available on:
www.marcegagliapaliniebertoli.it/wp-content/uploads/2019/12/indice.pdf
- UKCA Marking Certificate N.1244-CPR-1053 last issued 21/10/2022
Hot rolled products of structural steels in compliance with the Construction Products Regulation 2011 (retained EU law EUR 305/2011)
DOP available on https://www.quality.marcegaglia.com
- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
-We declare that the above mentioned plates are in compliance with the order prescriptions

CE 0474 MARCEGAGLIA EN 10025-1 EN 10025-3
UKCA 1244 MARCEGAGLIA EN 10025-1

Z 03 Inspection Body

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR A. GHERSINI DATE 23/11/2023

Z 02 Quality Control

MARCEGAGLIA Palini e Bertoli S.p.A. Luca Peressutti Quality Control

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001270	123A40D	Q012301696

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 21.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 26056/3
28.10.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.496 tons - lbs	110.97 meters - feets	13	4

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1
Contract 50005363

Dimensions: 168.30 x 18.26 mm
-

Schedule: 160

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1215358		Heat analysis		0.14	1.25	0.20	0.002	0.012	0.07	0.10	0.15	0.035	0.01	0.070	0.002	0.003	0.0003	0.0060
1215866		Heat analysis		0.14	1.22	0.19	0.002	0.010	0.08	0.11	0.18	0.036	0.01	0.069	0.002	0.003	0.0003	0.0050
1220116		Heat analysis		0.15	1.22	0.22	0.003	0.012	0.07	0.09	0.17	0.031	0.01	0.068	0.003	0.002	0.0004	0.0040
1215358	22-523	Product analysis		0.15	1.26	0.23	0.002	0.011	0.07	0.09	0.14	0.036	0.01	0.068	0.002	0.003	0.0003	0.0056
1215358	22-523	Product analysis		0.15	1.27	0.22	0.002	0.011	0.07	0.09	0.14	0.036	0.01	0.068	0.002	0.003	0.0002	0.0057
1215866	22-438	Product analysis		0.14	1.21	0.21	0.002	0.009	0.08	0.10	0.17	0.035	0.01	0.067	0.002	0.003	0.0004	0.0047
1215866	22-438	Product analysis		0.14	1.22	0.20	0.002	0.009	0.08	0.10	0.17	0.034	0.01	0.068	0.002	0.003	0.0004	0.0049
1220116	22-860	Product analysis		0.16	1.21	0.20	0.002	0.010	0.07	0.09	0.16	0.032	0.01	0.066	0.003	0.002	0.0003	0.0044
1220116	22-860	Product analysis		0.16	1.20	0.21	0.003	0.010	0.07	0.09	0.16	0.033	0.01	0.066	0.003	0.002	0.0003	0.0042

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 15/11/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 26056/3

28.10.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.496 tons - lbs	110.97 meters - feets	13	4

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1

Contract 50005363

Dimensions: 168.30 x 18.26 mm
-

Schedule: 160

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
1215358		Heat analysis		5.83	0.072	0.075	0.303	0.39	0.23
1215866		Heat analysis		7.20	0.071	0.074	0.343	0.39	0.27
1220116		Heat analysis		7.75	0.071	0.073	0.323	0.40	0.25
1215358	22-523	Product analysis		6.43	0.070	0.073	0.293	0.40	0.22
1215358	22-523	Product analysis		6.32	0.070	0.073	0.293	0.41	0.22
1215866	22-438	Product analysis		7.45	0.069	0.072	0.332	0.39	0.26
1215866	22-438	Product analysis		6.94	0.070	0.073	0.333	0.39	0.26
1220116	22-860	Product analysis		7.27	0.069	0.071	0.311	0.41	0.24
1220116	22-860	Product analysis		7.86	0.069	0.071	0.311	0.41	0.24

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 15/11/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 26056/3
28.10.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.496 tons - lbs	110.97 meters - feets	13	4

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1
Contract 50005363

Dimensions: 168.30 x 18.26 mm
-

Schedule: 160

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1215358	Longitudinal Flat	50.8	-	40.00	-	19.00	-	760.0	-	22-3814	424.00	-	529.00	-	43.10	0.80
1215358	Longitudinal Flat	50.8	-	40.00	-	18.60	-	744.0	-	22-3814	422.00	-	526.00	-	42.70	0.80
1215358	Longitudinal Flat	-	-	20.00	-	19.30	-	386.0	-	22-2643	425.10	-	531.10	-	38.70	0.80
1215866	Longitudinal Flat	50.8	-	40.00	-	18.90	-	756.0	-	22-3814	424.00	-	528.00	-	43.20	0.80
1215866	Longitudinal Flat	50.8	-	40.00	-	19.30	-	772.0	-	22-3814	426.00	-	532.00	-	43.50	0.80
1215866	Longitudinal Flat	-	-	20.00	-	18.70	-	374.0	-	22-2643	424.10	-	528.10	-	38.20	0.80
1220116	Longitudinal Flat	50.8	-	40.00	-	18.70	-	748.0	-	22-3814	425.00	-	530.00	-	42.90	0.80
1220116	Longitudinal Flat	50.8	-	40.00	-	19.10	-	764.0	-	22-3814	426.00	-	531.00	-	43.20	0.80
1220116	Longitudinal Flat	-	-	20.00	-	19.40	-	388.0	-	22-2643	426.00	-	532.20	-	39.30	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1215358	22-5804	Longitudinal	10x10x55	-52	27.0	186	203	215	40.0	201	-	-	-	95	100	100	1.67	1.81	1.90
1215866	22-5804	Longitudinal	10x10x55	-52	27.0	198	190	208	40.0	199	-	-	-	95	95	100	1.77	1.71	1.85
1220116	22-5804	Longitudinal	10x10x55	-52	27.0	223	209	196	40.0	209	-	-	-	100	100	95	1.94	1.86	1.76

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 15/11/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 26056/3

28.10.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.496 tons - lbs	110.97 meters - feets	13	4

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1

Contract 50005363

Dimensions: 168.30 x 18.26 mm
-

Schedule: 160

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1215358	22-3497	-	-	-	-	-	-	-	<20
1215358	22-3497	-	-	-	-	-	-	-	<20
1215866	22-3497	-	-	-	-	-	-	-	<20
1215866	22-3497	-	-	-	-	-	-	-	<20
1220116	22-3497	-	-	-	-	-	-	-	<20
1220116	22-3497	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 15/11/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 26056/3

28.10.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.496 tons - lbs	110.97 meters - feets	13	4

Buyer's reference: PO NO. : OF210777 rev.1

Contract 50005363

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Dimensions: 168.30 x 18.26 mm
-

Schedule: 160

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1215358	22-1376	450	302.00	-
1215866	22-1376	450	296.10	-
1220116	22-1376	450	297.70	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1215358	22-5238	OK
1215358	22-5238	OK
1215866	22-5238	OK
1215866	22-5238	OK
1220116	22-5238	OK
1220116	22-5238	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1215358	22-1209	0	10
1215866	22-1209	0	10
1220116	22-1209	0	10

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 15/11/22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 6/6 **B 26056/3** **28.10.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 7.496 tons - lbs	Total Length: 110.97 meters - feets	Pieces 13	Bundles 4
Buyer's reference PO NO. : OF210777 rev.1 **Contract 50005363**	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;				

Dimensions: 168.30 x 18.26 mm -	Schedule: 160	Length: 8.00 - 10.00 m -	- -

Item	Item Client
17	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
1215358	2	17.28	1167
1215866	6	51.35	3469
1220116	5	42.34	2860

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Interpipe Europe SA(Producator: Dneprosteel Ucraina) Via San Salvatore 13, PO Box 745 CH-6902 PARADISO-LUGANO SWITZERLAND .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 9 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 15/11/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001270	123A40D	Q012301234

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec P.O.
According to the spc.

TMUGF Firma
MTSMD Signature

Data
Date
01.08.2023

PAOLO ANCARANI
X REVIEW
☐ WITNESS

CUSTOMER

Approved by QUALITY2 on 18/11/22

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD
NO.21, XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY, JIANGSU PROVINCE, CHINA
PC: 214500

MILL TEST CERTIFICATE

Certificate No.: 22GC013082-1
Contract-Item No.: STITA22401TAL-01-020
Customer: T.A.L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO
Product: HOT ROLLED SEAMLESS STEEL TUBE
PO.NO.: OF220188
Original: Made in China

ACC.TO EN 10204 3.1

Steel Grade	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333 L360/X52/Gr.6	Process of manufacture	HR SMLS	Type of heat treatment	N

NO.	Size (mm)	Length	Heat No.	Lot No.	PCS	WT (t)	Total length	Bundles	Tensile Test				Grain Size (Gra-de)	Impact Test				Hardness Test	Hydrostatic Test	Duration of Time (s) ≥
									SampleType /Orientation /Dimension/GL (mm)	T.S (Rm)	Y.S(C1)	E.L %(A)		Impact Sample Type/Dimension (mm)	KV2 Impact Value(J)			Hardness Value MR0103/ NACE MR0175		
		m					m			MPa	MPa				-50℃	Ave. (J)	% Shear area	HRC(≤22)	MPa	
1	141.3*6.55	10-11.8	WK22C105842	2322050124	15	3.674	167.671	2	S/L25/50	535/530	403/401	42.0/42.5	8/8	L/5	95/99/100	98	90/95/95	2.1/2.2/2.2/1.5/1.6/1.8/1.6/1.5/1.9/1.8/2.1/1.9/1.5/1.8/1.7/1.5/1.6/1.9	20.0	5
2	141.3*6.55	10-11.8	WK22C105842	2322050125	72	16.427	748.502	8	S/L25/50	542/547	410/415	40.0/40.5	8/8	L/5	92/85/89	89	95/90/95	2.2/2.2/2.0/2.3/2.1/2.1/2.2/2.2/2.4/2.7/2.2/2.6/2.4/2.2/2.0/2.6/2.6/2.1	20.0	5
3																				

NO.	Composition Type	Chemical Composition %																								
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	Pb	C/Mn	Sb	Bi	Ca	N	H	CE_{PCM}	CE_{IIW}	B	Al/N		
1	R	0.17	0.29	1.13	0.011	0.002	0.03	0.01	0.01	0.023	0.005	0.028	0.036	0.003									0.37				
	C	0.15	0.28	1.15	0.011	0.004	0.04	0.01	0.01	0.030	0.005	0.029	0.036	0.005									0.36				
	C	0.16	0.29	1.14	0.010	0.003	0.03	0.01	0.01	0.032	0.001	0.029	0.035	0.005									0.36				
2	R	0.17	0.29	1.13	0.011	0.002	0.03	0.01	0.01	0.023	0.005	0.028	0.036	0.003									0.37				
	C	0.16	0.29	1.16	0.011	0.003	0.04	0.01	0.01	0.034	0.001	0.031	0.036	0.005									0.37				
	C	0.15	0.28	1.15	0.014	0.003	0.03	0.01	0.02	0.032	0.002	0.030	0.037	0.003									0.36				
3	R																									
	C																									
	C																									

Total Bundles	Total Pieces	Total Length m	Total Weight (t)	Cold Bending Test	Surface & Dimension	Pipe End (PE,BE)	Flatten	Residual Magnetic	SSC	HIC
10	87	916.173	20.101	/	Qualified	BE	/	Qualified	/	/

Non-destructive Inspection (piece by piece)

NDT Type	NDT Method	NDT Standard	NDT Area/Coverage	NDT Orientation	Level/Defect size	Result
Defect(End)	UT	ASTM E213-22	IN+EX	L+T	L4	Qualified
Defect(End)	EMI	ASTM E570-20	IN+EX	L+T	L4	Qualified
Defect(Body)	EMI	ASTM E570-20	IN+EX	L+T	L4	Qualified
Defect(Body)	UT	ASTM E213-22	IN+EX	L+T	L4	Qualified

L3—Notch depth:5% WT, L3—Notch depth:10% WT, L4-Notch depth:12.5% WT; notch length≤50mm, notch width≤1mm. MPI Sensitivity Test Panel: A1-30/100. Tensile Test:Sample Orientation:T= Transverse ,L= Longitudinal. Tensile Sample Type:S=Strip, C=Clubbed, F= Full-section. GL: Gauge Length. Yield Strength Selection: C1=Rt0.5, C2=Rel, C3=Rell, C4=Rp0.2.Impact Test:T= Transverse ,L= Longitudinal .Impact Sample Dimension:10-10*10*55mm.7.5-10*7.5*55mm.5-10*5*55mm.Composition Type: R-HeatAnalysis. C- Product Analysis. CE_{IIW}=C+Mn/6+(Cr+Mo+V)/5+(Cu+Ni)/15 CE_{PCM}=C+Si/30+(Mn+Cr+Cu)/20+Ni/60+Mo/15+V/10+5*B N-Normalising Q-Quenching HR-Hot Rolled Q&T-Quenching and Tempering N&T-Normalising and Tempering PE:plain end BE:bevel end .IN: Internal Surface; EX: External Surface; L: Longitudinally; T: Transversely

DATE:	INSPECTOR:	MANAGER OF INSPECTION:	
2022/7/4	王铁红	胡双凤	/

NOTE:
1.We here certify that the products here in described has been manufactured ; 2.Sampled tested and inspected in accordance with the specification and purchase order, and meet with the requirement ; 3.All pipes be made free of radiation contamination ;4.No duplicate will be accepted; 5.Pipes in compliance to PED 2014/68/EU as per ANNEX I par.4.3 and par.7.5; 6.All products meet requirements of the above mentioned standards, purchase order and tech spec. TS01R.7.; Declaration of guarantee to ASME II part.D Table y1;7.Protocol number:QJX/JT-C0073-2022-01

ROSETTI MARINO S.P.A. P.O.1723001270 TAL JOB N°323001935
N° 45 MT 468,25 HEAT WK22C105842 DIMENSIONS 141,3 x 6,55

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD
NO.21 XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY,JIANGSU PROVINCE,CHINA
PC:214500

MILL TEST CERTIFICATE

Contract-Item No. STITA22404TAL-01-010
Sheet No. 23GC014022

四 方

ACC TO EN10204 3.1

Purchaser	T. A. L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	Product	HOT ROLLED SEAMLESS STEEL TUBE	Specification	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333	Process Of Manufacture	HR SMLS	Type of heat treatment	Normalizing
Heat No.	WK22C205807	Lot No.	2323010207	Dimensions (mm)	141.3*6.55	Grade Steel Kind	L360/X52/Gr.6	End Type	Beveled
Length(m)	/	Bundles	9	Pieces	60	Total Length(m)	702.097	Total Weight (t)	15.340

PO NO. : OF 220623

I、Chemical Composition Reference standard:ASTM E415-21

Element	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Al	Ti	Nb	CEiiw	Nb+V+Ti+Cu+Mo+Cr
Min		0.15									0.015				
Max	0.20	0.35	1.30	0.020	0.0100	0.30	0.40	0.20	0.120	0.070	0.060	0.040	0.050	0.42	0.600
HeatAnalysis:	0.18	0.32	1.13	0.014	0.0020	0.01	0.01	0.03	0.004	0.030	0.023	0.005	0.038	0.382	0.117
Product:1)	0.14	0.25	1.13	0.013	0.0030	0.01	0.01	0.04	0.012	0.031	0.027	0.003	0.034	0.35	0.128
Product:2)	0.14	0.26	1.14	0.013	0.0030	0.01	0.01	0.04	0.015	0.029	0.027	0.003	0.038	0.35	0.133

II、Mechanical Properties Examination
一、TENSILE TEST Reference standard:ASTM A370-21
1、tensile strength Rm(Mpa)(Min: 460): 523/527
2、yield strength Rp0.2(Mpa)(Min: 360): 412/413
3、elongation after fracture A(%)(Min: 21.0): 39.0/40.0
4、test direction: longitudinal
5、Sample shape: strip specimen
6、specimen width(mm): 25
7、sampling location: through-wall
8、test temperature(℃): room temperature
9、original gauge length L0(mm): 50
二、IMPACT TEST Reference standard:ASTM E23-18
1、impact absorbed energy(J): 103,99,96|avg.99
2、shear area(%): 90,90,90
3、test direction: longitudinal
4、specimen size(mm): 10×5×55
5、Impact type: KV8
6、test temperature(℃): -50
7、sampling location: mid-wall
三、HARDNESS TEST1 Reference standard:ASTM E18-22
1、1 quadrant inside-wall(HRC): 1.5,1.6,1.7,1.5|avg.1.6
2、1 quadrant outside-wall(HRC): 1.9,2.2,2.0,2.1|avg.2.0
3、1 quadrant mid-wall(HRC): 1.8,2.0,1.9,2.1|avg.2.0
四、HARDNESS TEST2 Reference standard:ASTM E18-22
1、1 quadrant inside-wall(HRC): 2.3,2.1,2.0,1.9|avg.2.1
2、1 quadrant outside-wall(HRC): 2.3,2.6,2.4,2.2|avg.2.4
3、1 quadrant mid-wall(HRC): 2.0,2.1,2.5,2.1|avg.2.2

III、Microscopic Examination
一、GRAIN SIZE Reference standard:ASTM E112-13(2021)
1、grain size(grade)(Min: 8.0): 9.0/9.0

IV、NDT

NDT Position	NDT Method	NDT Standard	NDT Level	NDT Orientation	NDT Area/Coverage	Artificial defects Depth	Artificial defects Length	Artificial defects Width	Result
Pipe End	UT(2)	ASTM E213-22	L4	L+T	EX+IN	0.82	40	0.90	qualified

Material according to NACE MR0175/MR0103 for hardness(max.22HRC);Pipes in compliance with PED 2014/68/EU, Annex 1, par.4.3 and 7.5;Pipes free from radioactive contamination;Declaration of guarantee to ASME II part.D Table y1

Date	2023/02/02	Inspector	王艳红	Manager of Inspection	胡双凯
Note	We here certify that the products here in described has been manufactured , Sampled tested and inspected in accordance with the specification and purchase order,and meet with the requirement , All pipes be made free of radiation contamination , Without permission,the product without processing is not allowed to directly export to other countries and regions.				

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 10/07/23

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD
NO.21 XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY,JIANGSU PROVINCE,CHINA
PC:214500

MILL TEST CERTIFICATE

Contract-Item No. STITA22404TAL-01-010
Sheet No. 23GC014022

ACC TO EN10204 3.1

Purchaser	T. A. L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	Product	HOT ROLLED SEAMLESS STEEL TUBE	Specification	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333	Process Of Manufacture	HR SMLS	Type of heat treatment	Normalizing
Heat No.	WK22C205807	Lot No.	2323010207	Dimensions (mm)	141.3*6.55	Grade Steel Kind	L360/X52/Gr.6	End Type	Beveled
Length(m)	/	Bundles	9	Pieces	60	Total Length(m)	702.097	Total Weight (t)	15.340

Pipe Body	UT(1)	ASTM E213-22	L4	L+T	EX+IN	0.82	40	0.90	qualified
Pipe Body	MFL(1)	ASTM E570-20	L4	L+T	EX+IN	0.82	40	0.90	qualified
NDT Position	NDT Method	NDT Standard	NDT Request Value		Result				
Pipe End	MT	ASTM E709-21	Sensitivity A1-30/100		qualified				

V、Other
一、Hydrostatic Pressure Test
1、hydrostatic pressure(MPa): 20.0
2、hydrostatic keeping time(s): 6
3、hydrostatic pressure test: qualified

VI、Dimension, Appearance And Surface Quality
1、dimension, appearance and surface quality: qualified

Material according to NACE MR0175/MR0103 for hardness(max. 22HRC);Pipes in compliance with PED 2014/68/EU, Annex 1, par. 4.3 and 7.5;Pipes free from radioactive contamination;Declaration of guarantee to ASME II part.D Table y1

Date	2023/02/02	Inspector	王艳红	Manager of Inspection	胡双凯
Note	We here certify that the products here in described has been manufactured， Sampled tested and inspected in accordance with the specification and purchase order,and meet with the requirement， All pipes be made free of radiation contamination， Without permission,the product without processing is not allowed to directly export to other countries and regions.				

JINGJIANG SPECIAL STEEL CO.,LTD 江苏东绸有限公司 质量证明专用章

Approved by QUALITY2 on 10/07/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001270	123A40D	Q012301500

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 07.11.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **30481/23** Page: **1/2**

A07	Customer's Order (P.O.) No./Item No.: **OF220668**	A08	Manufacturer's Works Order No.: **59003/0/23**
A11	Supplier's Order No.: **3151020545**	A10	Advice - Note No.: **8150096771**
B08, B12/13	Quantity delivered: pcs / bdls: **50**; mtrs / feet: **563,746**; B13 Actual mass kgs / lbs: **12396**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 6-ZONA IND. 29017 FIORENZUOLA ARDA Italy**
B09-11	Dimensions: **141,3 x 6,55 mm (5" SCH40)**		
B02	Steel designation: **L360/X52 PSL1 Grade 6**		

B01,B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-18, ASTM A999/A999M-18, ASME SA999/SA999M-21,
API Spec.5L-46th edit.18 PSL1, EN ISO 3183/19, ASTM A333/A333M-18, ASME SA333/SA333M-21 – PED 2014/68/EU.
ASME II Part.D Table Y1-11a. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-15.
Normalized (860-945°C). **TS02 Rev.6 for T.A.L.+ LO deviation**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	AI	MO	V	TI	NB	CEQ
53530KU	**H**	**0,16**	**1,33**	**0,216**	**0,014**	**0,006**	**0,07**	**0,09**	**0,05**	**0,037**	**0,012**	**0,050**	**0,002**	**0,001**	**0,42**
	P	0,16	1,32	0,207	0,014	0,005	0,08	0,08	0,04	0,037	0,011	0,051	0,002	<0,001	0,41
	P	0,15	1,32	0,202	0,014	0,005	0,07	0,08	0,04	0,036	0,010	0,051	0,002	<0,001	0,41

Z99 ☐

Test results:	MPa	MPa	% (2")			HRB
B07 Heat No. C00 Specimen No.	C11 Yield Point	C12 Tensile Strength	C13 Elongation	C40-43 Impact test		C30-32 Hardness
C04 Requirements: L360/X52 Grade 6	**min. 360**	**min. 460**	**min. 22,0**	**A) L-5-20J / - 52°C**		**max. 99**
	min. 240	**min. 415**	**min. 27,0**	**B) INF: Shear Area (%)**		
	Longitudinal strip specimen 25,4 mm			Ø	min	
53530KU	**405**	**532**	**32,8**	**A) 84**	**85 82 84**	**82 ; 82**
	409	**537**	**31,4**	**B) 100**	**100 100 100**	
	408	**535**	**34,1**			

Z99 ☐

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	**20,0 / 5**
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test - satisfactory				

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2011, ISO 45001:2018.

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.

Elongation (A5) = min. 14% guaranteed ($L0 = 5.65 * \sqrt{S\,0}$)

Z99 X continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **01.03.2023/TR** Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

58

E.z. 2574/16/15/P

Approved by QUALITY1 on 07/03/23

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **30481/23** Page: **2/2**

Residual magnetic field [mT] max.3 - satisfactory **MANUFACTURER OF BILLETS: LIBERTY OSTRAVA**
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
22HRC=99HRBmax. **Grain size min. 7 acc. ASTM E112 is guaranteed.**
Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1.

C71-92 Heat (H) and product (P) chemical analyses (%)

B07 Heat No.	C	MN	SI	P	S	CU	NI	CR	AI	MO	V	TI	NB	CEQ

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test		C30-32 Hardness

Z02 Date of issue **01.03.2023/TR**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 07/03/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **21038/23** Page: **1/2**

A07	Customer's Order (P.O.) No./Item No.: **OF230074**	A08	Manufacturer's Works Order No.: **59064/0/23**
A11	Supplier's Order No.: **3151020929**	A10	Advice - Note No.: **8151001001**
B08, B12/13	Quantity delivered: pcs / bdls: **39**; mtrs / feet: **452,591**; B13 Actual mass kgs / lbs: **10028**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 6-ZONA IND. 29017 FIORENZUOLA ARDA Italy**
B09-11	Dimensions: **141,3 x 6,55 mm (5" SCH40)**		
B02	Steel designation: **L360/X52 PSL1 Grade 6**		

B01,B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-18, ASTM A999/A999M-18, ASME SA999/SA999M-21,
API Spec.5L-46th edit.18 PSL1, EN ISO 3183/19, ASTM A333/A333M-18, ASME SA333/SA333M-21 – PED 2014/68/EU.
ASME II Part.D Table Y1-11a. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-15.
Normalized (860-945°C). **TS02 Rev.6 for T.A.L.+ LO deviation**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 3 2

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	AI	MO	V	TI	NB	CEQ
54184K	**H**	**0,16**	**1,29**	**0,215**	**0,014**	**0,007**	**0,07**	**0,08**	**0,03**	**0,031**	**0,008**	**0,035**	**0,002**	**<0,003**	**0,40**
	P	0,16	1,24	0,209	0,013	0,007	0,07	0,08	0,03	0,030	0,007	0,035	0,002	<0,001	0,39
	P	0,16	1,24	0,209	0,013	0,006	0,07	0,08	0,03	0,029	0,007	0,035	0,002	<0,001	0,40

Z99 ☐

B07 Heat No. C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% (2") C13 Elongation	C40-43 Impact test	HRB C30-32 Hardness
C04 Requirements: L360/X52 Grade 6	min. 360	min. 460	min. 22,0	A) L-5-20J / - 52°C	max. 99
	min. 240	min. 415	min. 27,0	B) INF: Shear Area (%)	
	Longitudinal strip specimen 25,4 mm			Ø / min	
54184K	**386**	**526**	**33,3**	**A) 70** **62 74 74**	**79 78**
	383	**522**	**37,8**	**B) 93** **80 100 100**	
	383	**522**	**31,6**		

Z99 ☐

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	20,0 / 5
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test - satisfactory				

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018.

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.

Elongation (A5) = min. 14% guaranteed (**L0= 5.65 * $\sqrt{S0}$**)

Z99 X continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **31.3.2023/Vo** Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 31/03/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **21038/23** Page: **2/2**

Residual magnetic field [mT] max.3 - satisfactory
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
22HRC=99HRBmax. Grain size min. 7 acc. ASTM E112 is guaranteed.
Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1.
MANUFACTURER OF BILLETS: LIBERTY OSTRAVA

C71-92	Heat (H) and product (P) chemical analyses (%)															
B07	Heat No.															

	Test results:		MPa	MPa	%		
B07	Heat No.	C00 Specimen No.	C11 Yield Point	C12 Tensile Strength	C13 Elongation	C40-43 Impact Test	C30-32 Hardness

Z02 Date of issue **31.3.2023/Vo** Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 31/03/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 14/11/22

ROSETTI MARINO S.P.A. P.O. 1723001270 123A40D REV.2 TAL JOB N°323002651 OUR DDT N°202306597 OF 06/11/23
N° 2 MT 21,28 HEAT WND12203880XX DIMENSIONS 219,1 x 12,7

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD

NO.21, XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY, JIANGSU PROVINCE, CHINA
PC: 214500

四 方

MILL TEST CERTIFICATE

Certificate No.: 22GC018247-1
Contract-Item No.: STITA22401TAL-01-027
Customer: T.A.L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO
Product : HOT ROLLED SEAMLESS STEEL TUBE
PO.NO.: OF220188
Original: Made in China

ACC.TO EN 10204 3.1

Steel Grade	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333 L360/X52/Gr.6								Process of manufacture				HR SMLS				Type of heat treatment		N
NO.	Size (mm)	Length m	Heat No.	Lot No.	PCS	WT (t)	Total length m	Bundles	Tensile Test: SampleType /Orientation /Dimension/GL (mm)	Tensile Test: T.S (Rm) MPa	Tensile Test: Y.S(Cl) MPa	Tensile Test: E.L % (A)	Tensile Test: Reduction %	Grain Size (Gra-de)	Impact Test: Impact Sample Type/Dimension (mm)	Impact Test: KV_8Impact Value (J) -50℃	Impact Test: Ave. (J)	Impact Test: % Shear Area	Hardness Test: Hardness Value NACE MR0175 HRC(≤22)	Hydrostatic Test MPa	Duration of Time (s) ≥
1	219.1*12.7	10-11.8	WnD12203880 XX	2322061733-3	15	10.341	163.481	5	S/L38/50	564/546	474/446	45.0/49.0	/	9/9	T/10 /L/10	133/130/138 292/283/294	134/ 290	90/90/90/ 100/100/100	1.4/1.3/1.8/1.2/1.6/1.5/1.3/1.6/1.7/1.9/ 2.0/1.5/1.4/1.6/1.9/1.5/1.3/1.8	20.5	5
2																					
3																					

NO.	Composition Type	Chemical Composition % C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	Pb	C/Mn	Sb	Bi	Ca	N	H	CE_{PCM}	CE_{IIW}	B	Al/N		
1	R	0.18	0.23	1.16	0.009	0.002	0.02	0.01	0.01	0.025	0.001	0.032	0.039	0.015									0.39				
	C	0.17	0.25	1.17	0.006	0.005	0.03	0.01	0.01	0.021	0.001	0.026	0.034	0.011									0.38				
	C	0.18	0.25	1.21	0.008	0.005	0.03	0.01	0.01	0.020	0.001	0.025	0.038	0.011									0.39				
2	R																										
	C																										
	C																										
3	R																										
	C																										
	C																										

Total Bundles	Total Pieces	Total Length m	Total Weight (t)	Cold Bending Test	Surface & Dimension	Pipe End (PE,BE)	Flatten	Residual Magnetic	SSC	HIC
5	15	163.481	10.341	/	Qualified	BE	/	Qualified	/	/

Non-destructive Inspection (piece by piece)

NDT Type	NDT Method	NDT Standard	NDT Area/Coverage	NDT Orientation	Level/Defect size	Result
Defect(End)	UT	ASTM E213-22	IN+EX	L+T	L4	Qualified
Defect(End)	EMI	ASTM E570-20	IN+EX	L+T	L4	Qualified
Defect(Body)	EMI	ASTM E570-20	IN+EX	L+T	L4	Qualified
Defect(Body)	UT	ASTM E213-22	IN+EX	L+T	L4	Qualified

L2—Notch depth:5% WT, L3—Notch depth:10% WT, L4-Notch depth:12.5% WT; notch length≤50mm, notch width≤1mm. MPI Sensitivity Test Panel: A1-30/100. Tensile Test:Sample Orientation:T= Transverse ,L= Longitudinal. Tensile Sample Type:S=Strip, C=Chabbed, F= Full-section, GL- Gauge Length, Yield Strength Selection: C1=Rt0.5, C2=Rel, C3=ReH, C4=Rp0.2.Impact Test:T= Transverse ,L= Longitudinal .Impact Sample Dimension:10-10*10*55mm.7.5-10*7.5*55mm.5-10*5*55mm.Composition Type: R-HeatAnalysis, C- Product Analysis. CE_{IIW}=C+Mn/6+(Cr+Mo+V)/5+(Cu+Ni)/15 CE_{PCM}=C+Si/30+(Mn+Cr+Cu)/20+Ni/60+Mo/15+V/10+5*B N--Normalizing Q--Quenching HR--Hot Rolled Q&T--Quenching and Tempering N&T--Normalizing and Tempering PE:plain end BE:bevel end ,IN: Internal Surface; EX: External Surface; L: Longitudinally; T: Transversely

DATE:	INSPECTOR:	MANAGER OF INSPECTION:	
2022/7/4	王艳红	胡双凯	/

NOTE:
1.We here certify that the products here in described has been manufactured ; 2.Sampled tested and inspected in accordance with the specification and purchase order, and meet with the requirement ; 3.All pipes be made free of radiation contamination ;4.No duplicate will be accepted; 5.Pipes in compliance to PED 2014/68/EU as per ANNEX 1 par.4.3 and par.7.5; 6.All products meet requirements of the above mentioned standards, purchase order and tech spec. TS01R.7.; Declaration of guarantee to ASME II part.D Table y1;7.Protocol number:QJX/JT-C0073-2022-01

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD
NO.21 XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY,JIANGSU PROVINCE,CHINA
PC:214500

MILL TEST CERTIFICATE

Contract-Item No. STITA22404TAL-01-009
Sheet No. 23GC014021

ACC TO EN10204 3.1

Purchaser	T. A. L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	Product	HOT ROLLED SEAMLESS STEEL TUBE	Specification	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333	Process Of Manufacture	HR SMLS	Type of heat treatment	Normalizing
Heat No.	WK22C205807	Lot No.	2123010250	Dimensions (mm)	114.3*8.56	Grade Steel Kind	L360/X52/Gr.6	End Type	Beveled
Length(m)	/	Bundles	9	Pieces	60	Total Length(m)	671.604	Total Weight (t)	15.234

PO NO. : OF 220623

I、Chemical Composition Reference standard:ASTM E415-21

Element	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Al	Ti	Nb	CEiiw	Nb+V+Ti+Cu+Mo+Cr
Min		0.15									0.015				
Max	0.20	0.35	1.30	0.020	0.0100	0.30	0.40	0.20	0.120	0.070	0.060	0.040	0.050	0.42	0.600
HeatAnalysis:	0.18	0.32	1.13	0.014	0.0020	0.01	0.01	0.03	0.004	0.030	0.023	0.005	0.038	0.382	0.117
Product:1)	0.16	0.32	1.17	0.013	0.0017	0.01	0.01	0.03	0.012	0.032	0.028	0.005	0.036	0.37	0.123
Product:2)	0.16	0.32	1.16	0.014	0.0021	0.01	0.01	0.02	0.014	0.034	0.030	0.004	0.039	0.36	0.127

II、Mechanical Properties Examination
一、TENSILE TEST Reference standard:ASTM A370-21
1、tensile strength Rm(Mpa)(Min: 460): 554/556
2、yield strength Rp0.2(Mpa)(Min: 360): 428/430
3、elongation after fracture A(%)(Min: 23.0): 35.5/34.5
4、test direction: longitudinal
5、Sample shape: strip specimen
6、specimen width(mm): 25
7、sampling location: through-wall
8、test temperature(℃): room temperature
9、original gauge length L0(mm): 50
二、IMPACT TEST Reference standard:ASTM E23-18
1、impact absorbed energy(J): 214, 209, 221|avg. 215
2、shear area(%): 90, 90, 90
3、test direction: longitudinal
4、specimen size(mm): 10×5×55
5、Impact type: KV8
6、test temperature(℃): -50
7、sampling location: mid-wall
三、HARDNESS TEST1 Reference standard:ASTM E18-22
1、1 quadrant inside-wall(HRC): 2.2, 2.6, 2.5, 2.1|avg. 2.4
2、1 quadrant outside-wall(HRC): 2.0, 1.9, 1.5, 1.7|avg. 1.8
3、1 quadrant mid-wall(HRC): 2.3, 2.5, 2.1, 2.0|avg. 2.2
四、HARDNESS TEST2 Reference standard:ASTM E18-22
1、1 quadrant inside-wall(HRC): 1.8, 1.6, 1.7, 2.0|avg. 1.8
2、1 quadrant outside-wall(HRC): 2.3, 2.5, 2.0, 2.1|avg. 2.2
3、1 quadrant mid-wall(HRC): 1.9, 2.3, 2.1, 2.0|avg. 2.1

III、Microscopic Examination
一、GRAIN SIZE Reference standard:ASTM E112-13(2021)
1、grain size(grade)(Min: 8.0): 8.5/8.5

IV、NDT

NDT Position	NDT Method	NDT Standard	NDT Level	NDT Orientation	NDT Area/Coverage	Artificial defects Depth	Artificial defects Length	Artificial defects Width	Result
Pipe End	UT(2)	ASTM E213-22	L4	L+T	EX+IN	1.07	40	0.90	qualified

Material according to NACE MR0175/MR0103 for hardness(max. 22HRC);Pipes in compliance with PED 2014/68/EU, Annex 1, par. 4.3 and 7.5;Pipes free from radioactive contamination;Declaration of guarantee to ASME II part.D Table y1

Date	2023/02/02	Inspector	王艳红	Manager of Inspection	胡双凯
Note	We here certify that the products here in described has been manufactured， Sampled tested and inspected in accordance with the specification and purchase order,and meet with the requirement， All pipes be made free of radiation contamination， Without permission,the product without processing is not allowed to directly export to other countries and regions.				

Approved by QUALITY2 on 10/07/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

CITIC PACIFIC SPECIAL STEEL

JINGJIANG SPECIAL STEEL CO.,LTD
NO.21 XINGANG ROAD, JINGJIANG ECONOMIC DEVELOPMENT ZONE,
TAIZHOU CITY,JIANGSU PROVINCE,CHINA
PC:214500

MILL TEST CERTIFICATE

Contract-Item No. STITA22404TAL-01-009
Sheet No. 23GC014021

ACC TO EN10204 3.1

Purchaser	T. A. L. SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO	Product	HOT ROLLED SEAMLESS STEEL TUBE	Specification	API Spec 5L PSL1 /ISO3183/ASTM/ASME A/SA 333	Process Of Manufacture	HR SMLS	Type of heat treatment	Normalizing
Heat No.	WK22C205807	Lot No.	2123010250	Dimensions (mm)	114.3*8.56	Grade Steel Kind	L360/X52/Gr.6	End Type	Beveled
Length(m)	/	Bundles	9	Pieces	60	Total Length(m)	671.604	Total Weight (t)	15.234

Pipe Body	UT(1)	ASTM E213-22	L4	L+T	EX+IN	1.07	40	0.90	qualified
Pipe Body	MFL(1)	ASTM E570-20	L4	L+T	EX+IN	1.07	40	0.90	qualified
NDT Position	NDT Method	NDT Standard	NDT Request Value		Result				
Pipe End	MT	ASTM E709-21	Sensitivity A1-30/100		qualified				

V、Other
一、Hydrostatic Pressure Test
1、hydrostatic pressure(MPa): 20.5
2、hydrostatic keeping time(s): 6
3、hydrostatic pressure test: qualified

VI、Dimension, Appearance And Surface Quality
1、dimension, appearance and surface quality: qualified

JINGJIANG SPECIAL STEEL CO.,LTD 质量证明专用章

Material according to NACE MR0175/MR0103 for hardness(max. 22HRC);Pipes in compliance with PED 2014/68/EU, Annex 1, par. 4.3 and 7.5;Pipes free from radioactive contamination;Declaration of guarantee to ASME II part.D Table y1

Date	2023/02/02	Inspector	王艳红	Manager of Inspection	胡双凯
Note	We here certify that the products here in described has been manufactured， Sampled tested and inspected in accordance with the specification and purchase order,and meet with the requirement， All pipes be made free of radiation contamination， Without permission,the product without processing is not allowed to directly export to other countries and regions.				

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 10/07/23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723001341	123A40C	Q012301413

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani — **12.10.2023**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 6293 del 12/10/2023__P1449D__117378000

ArcelorMittal

ArcelorMittal Bremen GmbH
Postfach 210220
28222 BREMEN
Carl-Benz-Strasse 30
28237 BREMEN
Telefon 0421/6480
Telefax 0421/6482251

A02 CERTIFICATE

A03 Page: 02/ 02
20230029483-00

Inspection certificate 3.1 EN 10204

A05 ORIGINATOR OF THE DOCUMENT
ArcelorMittal Bremen GmbH
Carl-Benz-Straße 30, 28237 Bremen
zeugnisse.bremen@arcelormittal.com
Telefon 0421/6482813

A09 DISPATCH NOTE 0000325861
DATE 20.04.2023

A08.1 MANUFACTURER'S ORDER NR 2333342
DATE 10.01.2023
AGENCY'S ORDER NR. GH3B020006008

A07 CUSTOMER'S ORDER NUMBER
23-028/23-028-008

A10 PART NUMBER
2 S355J2+N-CL1

A06.1 CUSTOMER
FRANCHINI LAMIERE SPA

VIA IV NOVEMBRE 32
25010 SAN ZENO NAVIGLIO
Italien

A06.2 CONSIGNEE
FRANCHINI LAMIERE SPA

VIA IV NOVEMBRE 32
25010 SAN ZENO NAVIGLIO
Italien

PRODUCT: hot rolled unpickled coil QUALITY: S355J2+N-CAT_A STANDARD: EN 10025-2:2019

TERMS OF DELIVERY: EN 10051 (2010)

JITZ 1.82

A08.2 ITEM	B09 THICKNES mm	B10 WIDTH mm
8	11.99	2000.00

A08.2 ITEM	B07.1 COILNO	B07.1 PART	B13 WEIGHT kg	B07.2 HEAT	CHEMICAL ANALYSIS C71 C %	C73 Si %	C72 Mn %	C74 P %	C75 S %	C81 Cu %	C77 Al %	C76 N %	C83 B %	C84 V %	C78 Ti %	C82 Nb %	C79 Cr %	C80 Ni %	C85 Mo %	As %	Sn %
8	117378	000	23155	056260	.1917	.0179	1.483	.0107	.0027	.0364	.0362	.0040	.0000	.0038	.0160	.0127	.0279	.0346	.0066	.0018	.0028
	1		23155																		
TOTAL	1		23155																		

A08.2 ITEM	B07.1 COILNO	B07.1 PART	B13 WEIGHT kg	B07.2 HEAT	TENSILE TEST C02 PR °	C04 MAZ	C03 Temp °C	C11 yield p. Re MPa	C12 strenqth Rm MPa	C13 A105mm %	BENDTEST C50 Fa	SHOCK TEST C44 S0 cm²	C02 PR °	C03 Temp °C	C42 KV2VP 1 J	C42 KV2VP 2 J	C42 KV2VP 3 J	C43 KV2VP m J
8	117378	000	23155	056260	90	F	20	399	551	26	1	.8	0	-20	212	201	219	210
	1		23155															
TOTAL	1		23155															

We certify hereby that the delivery complies with the above mentioned specification.

BREMEN 20.04.2023

QUALITY DEPARTMENT
SITE EXPERT FOR INSPECTION
Kochanowski

C02 test direction relating to rolling direction (0°= L; 90°= T)
C04 specimen condition V:aged F:fresh N:normalised
C50 bend test 1:good
C43 result in J related to specimensize (C44)

FRANCHINI LAMIERE DDT Nr. 6293 del 12/10/2023__P1449D__117378000

ArcelorMittal

ArcelorMittal Bremen GmbH
Postfach 210220
28222 BREMEN
Carl-Benz-Strasse 30
28237 BREMEN
Telefon 0421/6480
Telefax 0421/6482251

A02 CERTIFICATE

A03 Page: 01/ 02
20230029483-00

Inspection certificate 3.1 EN 10204

A05 ORIGINATOR OF THE DOCUMENT
ArcelorMittal Bremen GmbH
Carl-Benz-Straße 30, 28237 Bremen
zeugnisse.bremen@arcelormittal.com
Telefon 0421/6482813

A09 DISPATCH NOTE 0000325861
DATE 20.04.2023

A08.1 MANUFACTURER'S ORDER NR 2333342
DATE 10.01.2023
AGENCY'S ORDER NR. GH3B020006008

A07 CUSTOMER'S ORDER NUMBER
23-028/23-028-008

A10 PART NUMBER
2 S355J2+N-CL1

A06.1 CUSTOMER
FRANCHINI LAMIERE SPA

VIA IV NOVEMBRE 32
25010 SAN ZENO NAVIGLIO
Italien

A06.2 CONSIGNEE
FRANCHINI LAMIERE SPA

VIA IV NOVEMBRE 32
25010 SAN ZENO NAVIGLIO
Italien

PRODUCT: hot rolled unpickled coil QUALITY: S355J2+N-CAT_A STANDARD: EN 10025-2:2019

TERMS OF DELIVERY: EN 10051 (2010)

JITZ 1.82

ArcelorMittal Bremen GmbH, Postfach 210220, 28222 BREMEN

FRANCHINI LAMIERE SPA

VIA IV NOVEMBRE 32

25010 SAN ZENO NAVIGLIO

Italien

UK CA

22

0879

ArcelorMittal Bremen
Carl-Benz-Straße 30
D-28237 Bremen

0879-CPR-10025-1-GE00004

hot rolled unpickled coil intended to be used in welded, bolted and riveted structures

Declaration of Performance(DoP)		
UK-QUALITY	designated UK-STANDARD	DoP
S355J2+N	EN 10025-2:2019	HR00017_UKCA_IT_V001

DoP-Link

http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V001_EN.pdf

CE

06

0045

ArcelorMittal Bremen
Carl-Benz-Straße 30
D-28237 Bremen

0045-CPR-0527

hot rolled unpickled coil intended to be used in welded, bolted and riveted structures

Declaration of Performance(DoP)		
CE-QUALITY	harmonised CE-STANDARD	DoP
S355J2+N	EN 10025-2:2019	HR00017_CPR2013-07-01_IT_V012

DoP-Link

http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf

NS. N. MATRICOLA
P1449

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0294315 — Page 1 / FIN

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: **FOS**

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/IND 27 J MINI/MOY

(5)

CDC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalization rolling
A : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
O : Adouci par recuit / Soft annealing

(1)

Organisme et/ou service de contrôle Inspection organism	Client et/ou destinataire Customer and/or consignee	N° Commande Courtier/Client Customer's Order Nbr	N° Commande Usine Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison Delivery condition
RECEPTION USINE (A05)	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE (A06)	23-278-017 (A07)	GH3I012011 000017 (A08)	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED (B01) 2_S355J2+N-CL1 (B02)	LTC : LN (B04) Traitement de référence / Treatment of test samples: BL (B05)

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse Weight	Empla.	Traction / Tensile requirements									Empla-	Résilience / Impact testing									
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos. Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C05	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-	-C42-	- ->	C43
1957046	730324437	001	1	10,000	2000,00		26207	1	T	P	PRISM	BL	20	493	600	25,6				1	BL	KV	L	- 20	P	155	150	151	152
2102032	730324437	001	1	10,000	2000,00		23006																					
1953048	730324439	001		10,000	2000,00			1	T	P	PRISM	BL	20	466	579	25,6				1	BL	KV	L	- 20	P	181	200	182	188
1953050	730324439	001	1	10,000	2000,00		26026																					

POS. N. MATRICOLA
1 P3078
2 P3083
NS. N. MATRICOLA
3 P3051

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,05 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%		
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97		
O/YCC		730324437	0,187	1,452	0,018	0,004	0,018	0,034	0,0001	0,042	0,013	0,007	0,0025	0,015	0,014	0,015	0,002				0,44	0,062						
O/YCC		730324439	0,183	1,466	0,015	0,004	0,012	0,031	0,0001	0,022	0,018	0,003	0,0032	0,013	0,015	0,013	0,001				0,43	0,050						

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix — C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62
(6) Mode élab.Meth.Coulée: T: Thomas M: Martin; E: Electrique / Electric; O/Y: Oxy.pur / Basic oxyg.; CC: Coulée Continue / Continuous casting — C70/93
(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. (D01)

Date 19/09/23
Agent / Receiving Agent
F. SIXDENIERS (Z02)
262

FRANCHINI LAMIERE DDT Nr. 6293 del 12/10/2023__P3083D__2102032

FRANCHINI LAMIERE DDT Nr. 6293 del 12/10/2023__P3083D__2102032

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-017	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957046 2102032 1953050	730324437 730324437 730324439	000017 000017 000017	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723001341	123A40C	Q012301410

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **11.10.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0294315 — Page 1 / FIN

A02 — A09/A03

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINIMD 27 J MINIMOY

(5) B03

CDC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalisation rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
M : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition (1)
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-017 A07	GH3I012011 000017 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04 Traitement de référence / Treatment of test samples (1) BL B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements										Emplacement	Résilience / Impact testing								
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<---	C42	--->	C43
1957046	730324437	001	1	10,000	2000,00		26207	1	T	P	PRISM	BL	20	493	600	25,6				1	BL	KV	L	- 20	P	155	150	151	152
2102032	730324437	001	1	10,000	2000,00		23006																					
1953048	730324439	001		10,000	2000,00			1	T	P	PRISM	BL	20	466	579	25,6				1	BL	KV	L	- 20	P	181	200	182	188
1953050	730324439	001	1	10,000	2000,00		26026																					

POS. N. MATRICOLA
1 P3078
2 P3083
NS. N. MATRICOLA
3 P3051

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%		
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97		
O/YCC		730324437	0,187	1,452	0,018	0,004	0,018	0,034	0,0001	0,042	0,013	0,007	0,0025	0,015	0,014	0,015	0,002				0,44	0,062						
O/YCC		730324439	0,183	1,466	0,015	0,004	0,012	0,031	0,0001	0,022	0,018	0,003	0,0032	0,013	0,015	0,013	0,001				0,43	0,050						

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix — C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62
(6) Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — B70/93
(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. — D01

Date 19/09/23
Agent / Receiving Agent
F. SIXDENIERS — Z02

262

FRANCHINI LAMIERE DDT Nr. 6281 del 11/10/2023__P3083D__2102032

FRANCHINI LAMIERE DDT Nr. 6281 del 11/10/2023__P3083D__2102032

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-017	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957046 2102032 1953050	730324437 730324437 730324439	000017 000017 000017	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

FRANCHINI LAMIERE DDT Nr. 6281 del 11/10/2023 _P3122D__1953051

INSPECTION CERTIFICATE NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02 — N° 730/0294757 — Page 1 / FIN — A09/A03

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/IND 27 J MINI/MOY (5)

B03

CDC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalisation rolling
A : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalising
D : Détensionné / Stress relieving
S : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle Inspection organism	Client et/ou destinataire Customer and/or consignee	N° Commande Courtier/Client Customer's Order Nbr	N° Commande Usine Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison Delivery condition
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-017 A07	GH3I012011 000017 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	(1) LTC : LN B04

Traitement de référence / Treatment of test samples: BL (1) B05

Identification du produit / Product identification		Poste	Nombre de pièces	Dimensions / Sizes (mm)			Masse Weight	Empla.	Traction / Tensile requirements											Empla-	Résilience / Impact testing									
Repère pièce Plate number	Coulée Heat	Item	Number of pieces	Epaisseur Thickness	Largeur Width	Longueur Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles Individual values			Moyenne Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C08	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-	-C42-	->	C43
1953048	730324439	001	1	10,000	2000,00		25757	1	T	P	PRISM	BL	20	466	579	25,6				1	BL	KV	L	- 20	P	181	200	182	188
1953049	730324439	001	1	10,000	2000,00		25996																						
1953051	730324439	001	1	10,000	2000,00		25946																						
1953032	730324439	001	1	10,000	2000,00		25956																						

NS. N. MATR COLA
1 P 3132
2 P 3126
3 P 3122
4 P 3123

C:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce Plate number	N° Coulée Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730324439	0,183	1,466	0,015	0,004	0,012	0,031	0,0001	0,022	0,018	0,003	0,0032	0,013	0,015	0,013	0,001				0,43	0,050					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix — C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; Q:1/8 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62
(6) Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric OY: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93
(7) Masse et nb pieces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 20/09/23
Agent / Receiving Agent
F. SIXDENIERS Z02
263

FRANCHINI LAMIERE DDT Nr. 6281 del 11/10/2023 __P3122D__1953051

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers	Nr Ordine Cliente Customer's order Nr	Nr Ordine Stabilimento Mill's order Nr	Specifica Tecnica Technical specification
	FRANCHINI LAMIERE SPA	23-278-017	GH3I012011	S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body	CE	Numero del certificato Certificat number	Anno / Year
	0333		HR00017_CPR2013-07-01_IT_V012	13
			http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	
	Organismo di Certificazione Approved body	UKCA	Numero del certificato Certificat number	Anno / Year
	8510		HR00017_UKCA_IT_V002	13
			http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1953051	730324439	000017	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
1963032	730324439	000017		
1953049	730324439	000017		
1953048	730324439	000017		

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001495	123A90A	Q012301586

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

22.11.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300610 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501180**

Date: **16-11-2023**

Order Status: **incomplete**

Inspection Dates
First: **20-10-2023**

final: **02-11-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001495 123A90A**

Description:

7 piece(s) of steel plate(s) **45710 kg** , as per attached inspection Certificate no.: **A0377515**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name. Michael Messerer
Signature
Date
Ref. No.:
Office. Vienna

22-NOV-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2300610-1

Z02 Date 16-11-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377515	A08 Order-No.:	3501180	A07 OrderDat.	12-09-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S420MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001495 123A90A	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
PROJECTCROSSWIND C.V..

B03 - Supplementary requirements
MATERIAL IS PRE-QUALIFIED AS PER EN10225, ANNEX B, OPTION 17. SPECIFICATION DEP 37.19.10.30-GEN. (02/2021) RESPECTED // DOC.: 123A90-MTO-ST-001 REV.00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
760333	212990/21	40	15,00	2000,0	11520	1		2.762	88899	13-11-2023	1PLATCS15044
760333	212992/21	40	15,00	2000,0	11904	1		2.852	88899	13-11-2023	1PLATCS15044
760420	211440/2	40	15,00	2000,0	11777	1		2.822	88899	13-11-2023	1PLATCS15044
760420	211441/2	40	15,00	2000,0	11614	1		2.783	88899	13-11-2023	1PLATCS15044
955033	216692/1	10	40,00	3000,0	12000	1		11.493	88827	10-11-2023	1PLATCS40051
955033	216694/1	10	40,00	3000,0	12000	1		11.497	88825	10-11-2023	1PLATCS40051
955033	216696/1	10	40,00	3000,0	12000	1		11.501	88827	10-11-2023	1PLATCS40051
		Sum				7		45.710			

B14 - Supplementary information

length-deviation for plate(s) 211440/2, 211441/2, 212990/21, 212992/21: Customer accepted the deviation.

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
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ONE STEP AHEAD.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
Surface acc. EN 10163 - 2 class B
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
955033	.033	.324	1.530	.007	.0010	.038	.172	.016	.003	.013	.004	.030	.012	.0058	.0002	.0020	.0022	.0030	.0020	.0020	.33
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
760333	.030	.339	1.370	.008	.0007	.039	.136	.013	.004	.011	.004	.028	.012	.0050	.0002	.0020	.0009	.0020	.0020	.0020	.29
760420	.031	.330	1.380	.006	.0007	.031	.135	.016	.004	.041	.004	.027	.012	.0043	.0003	.0020	.0009	.0020	.0020	.0020	.29

Z02
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Höpfl Nadine

Z03
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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
955033	.13	.034	.046	6.55
>=				2.00
Set values <=	.23	.090	.110	
760333	.12	.032	.044	7.80
760420	.12	.031	.043	7.21

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	26	26	26	46			
Set values <=													
760333	212990	CV 10x10	F	ZB2	T	-40	350	348	348	349			strain aged 5%, 60 min. at 250°C
	212990	CV 10x10	F	ZB2	T	-40	81	327	335	248	001	1	strain aged 5%, 60 min. at 250°C
760420	209368	CV 10x10	F	ZB2	T	-40	333	352	347	344			strain aged 5%, 60 min. at 250°C
	211441	CV 10x10	F	ZB2	T	-40	332	345	336	338	001	1	strain aged 5%, 60 min. at 250°C
955033	216694	CV 10x10	F	ZB2	T	-40	47	312	309	223			strain aged 5%, 60 min. at 250°C
	216694	CV 10x10	F	ZB2	T	-40	146	295	292	244	001	1	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
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Witnessed Monitored Reviewed
Name: Michael Messerer
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Office: Vienna
Signature

22-NOV-2023

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ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07	B06	C40		C01	C02	C12	C12	C12				
Heat No.	Plate No	Shape	SpThickn	loc.	Dir	Rm	Rm	Rm	Z(SV)	Z(SV)	Z(SV)	Z(AV)
			MM			MPa	MPa	MPa	%	%	%	%
>=						400	400	400	25	25	25	35
Set values <=												
760333	212990	Ø	6.00	F	S	532	516	517	85	85	81	84
760420	209397	Ø	6.06	F	S	559	559	557	84	85	85	85
955033	216694	Ø	9.98	F	S	550	548	549	83	84	83	84

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=						390	500		19.0			
Set values <=							660			93.00		
216692	30,0	41.13	F	O	T	503	587	A5	22.5	85.67		
	30,0	41.25	F	O	T	498	569	A5	25.7	87.43	001	1
216694	30,0	40.68	F	O	T	501	581	A5	23.7	86.29		
	30,0	40.90	F	O	T	499	568	A5	26.1	87.83	001	1
216696	30,0	41.07	F	O	T	514	588	A5	21.9	87.39		
	30,0	41.24	F	O	T	494	569	A5	24.7	86.74	001	1
>=						420	500		19.0			
Set values <=							660			93.00		
211440	30,0	15.19	F	O	T	424	568	A5	26.8	74.54		
	30,0	15.15	F	O	T	478	521	A5	28.7	91.67	001	1
211441	30,0	15.25	F	O	T	491	532	A5	25.6	92.24		
	30,0	15.25	F	O	T	486	529	A5	28.3	91.85	001	1
212990	30,0	15.30	F	O	T	462	521	A5	26.1	88.61		
	30,0	15.26	F	O	T	457	535	A5	24.8	85.38	001	1
212992	30,0	15.35	F	O	T	480	537	A5	23.8	89.33		
	30,0	15.32	F	O	T	465	538	A5	25.9	86.36	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength

Z02
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Höpfl Nadine

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22-NOV-2023

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B06 Plate No	C41 Width MM	C01 SpThickn MM	C01 loc.	C01 PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Z02
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22-NOV-2023

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH
>= Set values <=					-40	42	42	42	60		
211440	CV 10x10	F	O	T	-40	403	414	400	406		
	CV 10x10	F	O	T	-40	368	372	375	372	001	1
211441	CV 10x10	F	O	T	-40	400	416	412	409		
	CV 10x10	F	O	T	-40	388	382	380	384	001	1
212990	CV 10x10	F	O	T	-40	391	386	392	389		
	CV 10x10	F	O	T	-40	377	369	384	376	001	1
212992	CV 10x10	F	O	T	-40	408	400	396	401		
	CV 10x10	F	O	T	-40	382	381	380	381	001	1
216692	CV 10x10	F	O	T	-40	354	364	356	358		
	CV 10x10	F	O	T	-40	335	345	289	323	001	1
216694	CV 10x10	F	O	T	-40	366	377	351	365		
	CV 10x10	F	O	T	-40	334	329	332	332	001	1
216696	CV 10x10	F	O	T	-40	57	94	139	97		
	CV 10x10	F	O	T	-40	297	210	343	283	001	1

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
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Name: Michael Messerer
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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH

C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
955033	216694	.033	.324	1.520	.007	.0007	.038	.171	.016	.003	.013	.004	.029	.012	.0061	.0002	.0020	.0025	.0020	.0020
>=							.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
760333	210754	.030	.320	1.360	.008	.0008	.034	.121	.014	.002	.011	.004	.029	.011	.0047	.0002	.0020	.0006	.0020	.0020
760420	209365	.029	.332	1.380	.007	.0003	.032	.132	.015	.003	.040	.004	.026	.012	.0041	.0002	.0020	.0010	.0020	.0020
	209403	.029	.321	1.340	.006	.0003	.031	.128	.015	.003	.038	.003	.024	.011	.0040	.0002	.0020	.0010	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.090	.110	
955033	216694	.0020	.0020	.32	.13	.033	.045	6.23
	>=							2.00
Set values	<=	.0100	.0100	.42	.23	.090	.110	
760333	210754	.0020	.0020	.28	.12	.033	.044	7.23
760420	209365	.0020	.0020	.29	.12	.030	.042	7.80
	209403	.0020	.0020	.28	.12	.027	.038	7.75

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 10:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Item 40:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

22-NOV-2023

voestalpine
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Remarks

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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22-NOV-2023

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature
22-NOV-2023

voestalpine
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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001495	123A90A	Q012301587

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **22.11.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number:**AUT 2300610 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501180**

Date: **20-11-2023**

Order Status: **complete**

Inspection Dates
First: **17-10-2023**

final: **03-11-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001495 123A90A**

Description:

29 piece(s) of steel plate(s) **114706 kg** , as per attached inspection Certificate no.: **A0377578**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date
Ref. No.:
Office: Vienna
Signature

22-NOV-2023

Surveyor to LRQA Austria GmbH

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300610-2 K

Z02 Date 20-11-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377578	A08 Order-No.:	3501180	A07 OrderDat.	12-09-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S420MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001495 123A90A	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
PROJECTCROSSWIND C.V..

B03 - Supplementary requirements
MATERIAL IS PRE-QUALIFIED AS PER EN10225, ANNEX B, OPTION 17. SPECIFICATION DEP 37.19.10.30-GEN. (02/2021) RESPECTED // DOC.: 123A90-MTO-ST-001 REV.00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
760333	212990/11	40	15,00	2000,0	12000	1		2.881	89083	16-11-2023	1PLATCS15044
760333	212992/11	40	15,00	2000,0	12000	1		2.880	89083	16-11-2023	1PLATCS15044
760420	211440/1	40	15,00	2000,0	12000	1		2.880	89083	16-11-2023	1PLATCS15044
760420	211441/1	40	15,00	2000,0	12000	1		2.879	89172	19-11-2023	1PLATCS15044
760425	214400/1	40	15,00	2000,0	12000	1		2.880	89172	19-11-2023	1PLATCS15044
760425	214400/2	40	15,00	2000,0	11915	1		2.855	89083	16-11-2023	1PLATCS15044
760425	214401/1	40	15,00	2000,0	12000	1		2.879	89083	16-11-2023	1PLATCS15044
760425	214401/2	40	15,00	2000,0	11868	1		2.844	89172	19-11-2023	1PLATCS15044
760425	214402/2	40	15,00	2000,0	11828	1		2.834	89172	19-11-2023	1PLATCS15044
760425	214402/1	40	15,00	2000,0	12000	1		2.880	89172	19-11-2023	1PLATCS15044
760425	214403/1	40	15,00	2000,0	12000	1		2.880	89172	19-11-2023	1PLATCS15044
760425	214403/2	40	15,00	2000,0	11612	1		2.782	89172	19-11-2023	1PLATCS15044
760946	216927/2	30	20,00	2000,0	12000	1		3.866	89172	19-11-2023	1PLATCS20056
760946	216927/1	30	20,00	2000,0	12000	1		3.865	89172	19-11-2023	1PLATCS20056

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
760946	216929/1	30	20,00	2000,0	12000	1		3.865	89172	19-11-2023	1PLATCS20056
760946	216929/2	30	20,00	2000,0	12000	1		3.865	89172	19-11-2023	1PLATCS20056
760946	216931/2	30	20,00	2000,0	12000	1		3.847	89172	19-11-2023	1PLATCS20056
760946	216931/1	30	20,00	2000,0	12000	1		3.847	89172	19-11-2023	1PLATCS20056
760946	216933/1	30	20,00	2000,0	12000	1		3.865	89172	19-11-2023	1PLATCS20056
760946	216933/2	30	20,00	2000,0	12000	1		3.865	89172	19-11-2023	1PLATCS20056
760946	216935/1	30	20,00	2000,0	12000	1		3.865	89083	16-11-2023	1PLATCS20056
760946	216935/2	30	20,00	2000,0	12000	1		3.865	89083	16-11-2023	1PLATCS20056
954770	213954/1	20	25,00	2500,0	12000	1		5.960	89083	16-11-2023	1PLATCS25061
954770	213955/1	20	25,00	2500,0	12000	1		5.960	89083	16-11-2023	1PLATCS25061
954770	213957/1	20	25,00	2500,0	12000	1		5.964	89083	16-11-2023	1PLATCS25061
954770	213959/1	20	25,00	2500,0	12000	1		5.962	89083	16-11-2023	1PLATCS25061
954770	213961/1	20	25,00	2500,0	12000	1		5.964	89083	16-11-2023	1PLATCS25061
954770	213963/1	20	25,00	2500,0	12000	1		5.965	89157	18-11-2023	1PLATCS25061
954770	213965/1	20	25,00	2500,0	12000	1		5.962	89083	16-11-2023	1PLATCS25061
		Sum				**29**		**114.706**			

B14 - Supplementary information

length-deviation for plate(s) 214400/2, 214401/2, 214402/2, 214403/2: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
Surface acc. EN 10163 - 2 class B
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
760946	.029	.348	1.390	.006	.0008	.036	.132	.016	.003	.011	.004	.028	.011	.0050	.0002	.0020	.0009	.0020	.0020	.0020	.29
954770	.028	.347	1.360	.008	.0008	.037	.118	.013	.003	.011	.003	.027	.012	.0047	.0002	.0020	.0006	.0020	.0020	.0020	.28
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
760333	.030	.339	1.370	.008	.0007	.039	.136	.013	.004	.011	.004	.028	.012	.0050	.0002	.0020	.0009	.0020	.0020	.0020	.29
760420	.031	.330	1.380	.006	.0007	.031	.135	.016	.004	.041	.004	.027	.012	.0043	.0003	.0020	.0009	.0020	.0020	.0020	.29
760425	.033	.345	1.370	.010	.0008	.031	.129	.014	.002	.012	.004	.027	.012	.0048	.0002	.0020	.0007	.0020	.0020	.0020	.29

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
760946	.12	.032	.043	7.20
954770	.12	.030	.042	7.87
>=				2.00
Set values <=	.23	.090	.110	
760333	.12	.032	.044	7.80
760420	.12	.031	.043	7.21
760425	.12	.031	.043	6.46

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	26	26	26	46			
Set values <=													
760333	212990	CV 10x10	F	ZB2	T	-40	350	348	348	349			strain aged 5%, 60 min. at 250°C
	212990	CV 10x10	F	ZB2	T	-40	81	327	335	248	001	1	strain aged 5%, 60 min. at 250°C
760420	209368	CV 10x10	F	ZB2	T	-40	333	352	347	344			strain aged 5%, 60 min. at 250°C
	211441	CV 10x10	F	ZB2	T	-40	332	345	336	338	001	1	strain aged 5%, 60 min. at 250°C
760425	214401	CV 10x10	F	ZB2	T	-40	377	372	381	377			strain aged 5%, 60 min. at 250°C
	214401	CV 10x10	F	ZB2	T	-40	355	346	360	354	001	1	strain aged 5%, 60 min. at 250°C
760946	216931	CV 10x10	F	ZB2	T	-40	353	328	323	335			strain aged 5%, 60 min. at 250°C
	216931	CV 10x10	F	ZB2	T	-40	340	344	369	351	001	1	strain aged 5%, 60 min. at 250°C
954770	213955	CV 10x10	F	ZB2	T	-40	355	350	338	347			strain aged 5%, 60 min. at 250°C
	213955	CV 10x10	F	ZB2	T	-40	385	389	388	387	001	1	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07	B06	C40	C01	C02	C12	C12	C12				
Heat No.	Plate No	Shape	SpThickn MM	loc.	Dir	Rm MPa	Rm MPa	Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						400	400	400	25	25	25	35
Set values <=												
760333	212990	Ø	6.00	F	S	532	516	517	85	85	81	84
760420	209397	Ø	6.06	F	S	559	559	557	84	85	85	85
760425	214401	Ø	5.98	F	S	546	548	555	82	80	82	82
760946	215075	Ø	5.94	F	S	539	536	542	87	85	86	86
954770	213955	Ø	10.00	F	S	550	551	551	85	85	86	85

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=						400	500		19.0			
Set values <=							660			93.00		
213954	30,0	25.40	F	O	T	512	563	A5	25.1	91.02		
	30,0	25.46	F	O	T	491	556	A5	26.2	88.34	001	1
213955	30,0	25.14	F	O	T	507	563	A5	25.9	90.03		
	30,0	25.16	F	O	T	478	551	A5	27.4	86.85	001	1
213957	30,0	25.22	F	O	T	492	547	A5	24.5	89.96		
	30,0	25.21	F	O	T	473	550	A5	27.0	85.92	001	1
213959	30,0	25.23	F	O	T	518	564	A5	22.4	91.86		
	30,0	25.25	F	O	T	489	558	A5	25.4	87.72	001	1
213961	30,0	25.31	F	O	T	504	559	A5	24.0	90.05		
	30,0	25.29	F	O	T	482	557	A5	25.6	86.60	001	1
213963	30,0	25.47	F	O	T	506	559	A5	24.0	90.51		
	30,0	25.37	F	O	T	485	556	A5	25.8	87.22	001	1
213965	30,0	25.31	F	O	T	501	557	A5	24.1	90.02		
	30,0	25.26	F	O	T	498	540	A5	28.6	92.22	001	1
216927	30,0	20.53	F	O	T	469	556	A5	24.2	84.35		
	30,0	20.44	F	O	T	481	530	A5	24.9	90.67	001	1
216929	30,0	20.73	F	O	T	487	527	A5	28.9	92.46		
	30,0	20.73	F	O	T	476	522	A5	29.7	91.28	001	1
216931	30,0	20.06	F	O	T	486	591	A5	25.6	82.14		
	30,0	19.92	F	O	T	464	521	A5	28.4	89.18	001	1
216933	30,0	20.39	F	O	T	478	517	A5	28.9	92.44		
	30,0	20.03	F	O	T	468	523	A5	27.0	89.51	001	1

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B06 Plate No	C41 Width	SpThickn MM	C01 loc.		PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							400	500		19.0			
Set values <=								660			93.00		
216935	30,0	20.58	F	O		T	503	550	A5	22.9	91.42		
	30,0	20.50	F	O		T	490	545	A5	25.9	89.94	001	1
Set values >=							420	500		19.0			
Set values <=								660			93.00		
211440	30,0	15.19	F	O		T	424	568	A5	26.8	74.54		
	30,0	15.15	F	O		T	478	521	A5	28.7	91.67	001	1
211441	30,0	15.25	F	O		T	491	532	A5	25.6	92.24		
	30,0	15.25	F	O		T	486	529	A5	28.3	91.85	001	1
212990	30,0	15.30	F	O		T	462	521	A5	26.1	88.61		
	30,0	15.26	F	O		T	457	535	A5	24.8	85.38	001	1
212992	30,0	15.35	F	O		T	480	537	A5	23.8	89.33		
	30,0	15.32	F	O		T	465	538	A5	25.9	86.36	001	1
214400	30,0	15.31	F	O		T	462	569	A5	25.6	81.18		
	30,0	15.24	F	O		T	455	506	A5	30.9	89.86	001	1
214401	30,0	15.26	F	O		T	474	514	A5	28.6	92.26		
	30,0	15.20	F	O		T	455	502	A5	29.7	90.67	001	1
214402	30,0	15.30	F	O		T	476	581	A5	23.8	81.87		
	30,0	15.33	F	O		T	469	510	A5	29.1	91.99	001	1
214403	30,0	15.39	F	O		T	477	540	A5	25.7	88.43		
	30,0	15.36	F	O		T	488	527	A5	28.9	92.57	001	1

SpThickn: specimen thickness
C01;loc.:

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B06 Plate No	C41 Width MM	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH
Set values >=					-40	42	42	42	60		
211440	CV 10x10	F	O	T	-40	403	414	400	406		
	CV 10x10	F	O	T	-40	368	372	375	372	001	1
211441	CV 10x10	F	O	T	-40	400	416	412	409		
	CV 10x10	F	O	T	-40	388	382	380	384	001	1
212990	CV 10x10	F	O	T	-40	391	386	392	389		
	CV 10x10	F	O	T	-40	377	369	384	376	001	1
212992	CV 10x10	F	O	T	-40	408	400	396	401		
	CV 10x10	F	O	T	-40	382	381	380	381	001	1
213954	CV 10x10	F	O	T	-40	375	394	392	387		
	CV 10x10	F	O	T	-40	385	387	394	389	001	1
213955	CV 10x10	F	O	T	-40	389	399	406	398		
	CV 10x10	F	O	T	-40	241	291	269	267	001	1
213957	CV 10x10	F	O	T	-40	371	382	386	380		
	CV 10x10	F	O	T	-40	370	394	392	385	001	1
213959	CV 10x10	F	O	T	-40	386	388	377	384		
	CV 10x10	F	O	T	-40	388	398	391	392	001	1
213961	CV 10x10	F	O	T	-40	385	384	390	386		
	CV 10x10	F	O	T	-40	380	383	359	374	001	1
213963	CV 10x10	F	O	T	-40	373	376	387	379		
	CV 10x10	F	O	T	-40	365	380	360	369	001	1
213965	CV 10x10	F	O	T	-40	382	385	394	387		
	CV 10x10	F	O	T	-40	363	375	377	372	001	1

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH
>= Set values <=					-40	42	42	42	60		
214400	CV 10x10	F	O	T	-40	397	415	414	409		
	CV 10x10	F	O	T	-40	407	415	410	411	001	1
214401	CV 10x10	F	O	T	-40	410	409	409	409		
	CV 10x10	F	O	T	-40	400	411	405	405	001	1
214402	CV 10x10	F	O	T	-40	388	409	397	398		
	CV 10x10	F	O	T	-40	394	407	405	402	001	1
214403	CV 10x10	F	O	T	-40	386	405	408	400		
	CV 10x10	F	O	T	-40	401	399	396	399	001	1
216927	CV 10x10	F	O	T	-40	339	362	376	359		
	CV 10x10	F	O	T	-40	169	195	130	165	001	1
216929	CV 10x10	F	O	T	-40	378	380	393	384		
	CV 10x10	F	O	T	-40	332	342	331	335	001	1
216931	CV 10x10	F	O	T	-40	315	298	314	309		
	CV 10x10	F	O	T	-40	372	375	353	367	001	1
216933	CV 10x10	F	O	T	-40	352	373	376	367		
	CV 10x10	F	O	T	-40	334	339	352	342	001	1
216935	CV 10x10	F	O	T	-40	396	399	407	401		
	CV 10x10	F	O	T	-40	356	380	377	371	001	1

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH

PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
760946	215050	.029	.346	1.380	.006	.0009	.035	.125	.013	.003	.011	.003	.028	.011	.0046	.0002	.0020	.0008	.0020	.0020
954770	213955	.026	.354	1.390	.008	.0006	.040	.125	.013	.004	.011	.003	.027	.013	.0046	.0002	.0020	.0008	.0020	.0020
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
760333	210754	.030	.320	1.360	.008	.0008	.034	.121	.014	.002	.011	.004	.029	.011	.0047	.0002	.0020	.0006	.0020	.0020
760420	209365	.029	.332	1.380	.007	.0003	.032	.132	.015	.003	.040	.004	.026	.012	.0041	.0002	.0020	.0010	.0020	.0020
	209403	.029	.321	1.340	.006	.0003	.031	.128	.015	.003	.038	.003	.024	.011	.0040	.0002	.0020	.0010	.0020	.0020
760425	214401	.032	.352	1.370	.010	.0006	.031	.126	.013	.002	.012	.004	.028	.012	.0044	.0002	.0020	.0006	.0020	.0020

Z02
Inspection representative voestalpine
Hopfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

22-NOV-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.42	.22	.090	.110	
760946	215050	.0020	.0020	.29	.12	.031	.042	7.61
954770	213955	.0020	.0020	.29	.12	.030	.043	8.70
>=								2.00
Set values <=		.0100	.0100	.42	.23	.090	.110	
760333	210754	.0020	.0020	.28	.12	.033	.044	7.23
760420	209365	.0020	.0020	.29	.12	.030	.042	7.80
	209403	.0020	.0020	.28	.12	.027	.038	7.75
760425	214401	.0020	.0020	.29	.12	.032	.044	7.05

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 20:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Item 30:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Item 40:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

22-NOV-2023

voestalpine
ONE STEP AHEAD.

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

22-NOV-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

22-NOV-2023

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301640

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 04.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000847 **Rev. N°:** 0 **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

781/ 3402

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
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PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 4 MT 36,88 HEAT 56110K DIMENSIONS 273 x 12,7

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **73555/23**

A07	Customer's Order (P.O.) No./Item No.: **OF230663**	A08	Manufacturer's Works Order No.: **59468/0/23**
A11	Supplier's Order No.: **3151031653**	A10	Advice - Note No.: **8151007818**
B03, B12/13	Quantity delivered: B13 Actual mass pcs / bdls: **16**; mtrs / feet: **148,060**; kgs / lbs: **12039**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **273,0 X 12,70 mm (10" SCH60)**		
B02	Steel designation: **L360N/X52N PSL2 Grade 6 P355NL1**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-22,
ASTM A999/A999M-18, ASME SA999/SA999M-23, ASME SA333/SA333M/23
API Spec.5L-46th edit.18 PSL2, ASTM A333/A333M-18 - PED 2014/68/EU
EN 10216-3/13 TC1 - PED 2014/68/EU,
ANSI/NACE MR0175/ISO 15156-23, ANSI/NACE MR0103/ISO 17945-20. ASME Sec.II, Part.D, Table Y-1
Normalized (860 – 945°C) **TS02 Rev. 07 for T.A.L.**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ
56110K	H	0,14	1,24	0,313	0,011	0,005	0,09	0,03	0,05	0,031	0,0093	0,008	0,066	0,002	<0,003	0,0003	0,38
	P	0,13	1,24	0,304	0,011	0,005	0,09	0,04	0,04	0,033	0,0071	0,008	0,065	0,002	<0,001	0,0003	0,37
	P	0,13	1,24	0,299	0,011	0,005	0,09	0,04	0,04	0,032	0,0077	0,008	0,063	0,002	<0,001	0,0002	0,37

Z99 ☐

B07 Heat No. C00 Specimen No.			C11 Yield Point MPa	C12 Tensile Strength MPa	C13 Elongation %	C40-43 Impact test				C30-32 Hardness HRB
C04 Requirements:	L360N/X52N		360 - 530	460 - 760	min. 27,0 (2")	A) L-10-40J/ -52°C				max. 99
	Grade 6		min. 240	min. 415	min. 30,0 (2")	B) INF. Shear area (%)				
	P355NL1		min. 355	490 - 650	min. 22,0 (5d)	C) T-7,5-21J / -40°C				
			Longitudinal strip specimen 38,1 mm			Ø	min			
56110K/1	L360N/X52N	67007	428	546	42,7	A) 177	222	152	158	84 81
	Gr.6	67009	430	544	43,5	B) 66	100	46	52	
	P355NL1	67011	419	527	24,0	C) 133	142	117	141	

Z99 ☐

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec	20,5 / 10
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing flux - leakage notch 12.5%	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X		acc. to ASTM E570 - longitudinal imperfections – satisfactory	X

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018.

Z99 X continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

Z02 Date of issue **31.10.2023/JN** Tel.:++420 595683644

LIBERTY

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E z. 2574/16/15/P

Approved by QUALITY1 on 02/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 4 MT 36,88 HEAT 56110K DIMENSIONS 273 x 12,7

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **73555/23** Page: **2/2**

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
Residual magnetic field [mT] max.3- satisfactory.
MANUFACTURER OF BILLETS: LIBERTY OSTRAVA
22HRC=99HRBmax.
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties at elevated temperatures for gr. 6 as per ASTM A333/A333M-18.
Grain size min. 7 acc. ASTM E112 is guaranteed.
Elongation (AS) = min. 14% guaranteed (L0= 5.65 * $\sqrt{S0}$)

C71-92 Heat (H) and product (P) chemical analyses (%)

B07 Heat No.	C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test	C30-32 Hardness

BUREAU VERITAS ITALY VERIFIED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

Z02 Date of issue **31.10.2023/JN**

Tel.:++420 595683644

LIBERTY

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 02/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301641

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **04.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000847 **Rev. N°:** 0 **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

788/ 3402

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY WITNESSED [redacted] REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 11,74 HEAT 1230908 DIMENSIONS 323,8 x 10,31

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/6 B 27714/2 29.06.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 9.018 tons - lbs	Total Length: 113.14 meters - feets	Pieces 10	Bundles -

Buyer's reference: PO NO. : OF230436	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Contract 50005848	Dimensions: 323.80 x 10.31 mm -	Schedule: 40	Length: 10.00 - 11.80 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
5	-		195	-	19.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1230908		Heat analysis		0.13	1.21	0.21	0.002	0.009	0.09	0.11	0.16	0.028	0.01	0.068	0.001	0.002	0.0004	0.0057
1230912		Heat analysis		0.14	1.20	0.21	0.003	0.011	0.07	0.10	0.15	0.034	0.01	0.067	0.001	0.002	0.0004	0.0094
2303261		Heat analysis		0.15	1.24	0.21	0.001	0.010	0.01	0.02	0.01	0.029	0.00	0.063	0.002	0.002	0.0005	0.0040
1230908	23-640	Product analysis		0.13	1.23	0.21	0.002	0.008	0.08	0.11	0.16	0.030	0.01	0.067	0.001	0.002	0.0003	0.0060
1230908	23-640	Product analysis		0.13	1.23	0.21	0.002	0.009	0.08	0.11	0.16	0.031	0.01	0.066	0.001	0.002	0.0003	0.0058
1230912	23-635	Product analysis		0.15	1.23	0.22	0.003	0.010	0.06	0.10	0.19	0.036	0.01	0.066	0.001	0.002	0.0002	0.0091
1230912	23-635	Product analysis		0.14	1.23	0.22	0.003	0.010	0.07	0.10	0.19	0.035	0.01	0.066	0.001	0.002	0.0002	0.0093
2303261	23-626	Product analysis		0.15	1.26	0.22	0.001	0.008	0.01	0.02	0.01	0.032	0.00	0.061	0.002	0.002	0.0003	0.0042
2303261	23-626	Product analysis		0.14	1.26	0.22	0.001	0.009	0.01	0.02	0.01	0.031	0.00	0.062	0.002	0.002	0.0003	0.0044

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 10/07/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 2/6 B 27714/2 29.06.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 9.018 tons - lbs	Total Length: 113.14 meters - feets	Pieces 10	Bundles -

Buyer's reference PO NO. : OF230436	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50005848	Dimensions: 323.80 x 10.31 mm - / Schedule: 40 / Length: 10.00 - 11.80 m - / - -

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	195	-	19.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
1230908		Heat analysis		4.91	0.069	0.071	0.336	0.39	0.27
1230912		Heat analysis		3.62	0.068	0.070	0.299	0.38	0.23
2303261		Heat analysis		7.25	0.065	0.067	0.095	0.37	0.03
1230908	23-640	Product analysis		5.00	0.068	0.070	0.320	0.38	0.25
1230908	23-640	Product analysis		5.34	0.067	0.069	0.319	0.38	0.25
1230912	23-635	Product analysis		3.96	0.067	0.069	0.329	0.40	0.26
1230912	23-635	Product analysis		3.76	0.067	0.069	0.339	0.39	0.27
2303261	23-626	Product analysis		7.62	0.063	0.065	0.085	0.38	0.02
2303261	23-626	Product analysis		7.05	0.064	0.066	0.086	0.37	0.02

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A_rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 10/07/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 11,74 HEAT 1230908 DIMENSIONS 323,8 x 10,31

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/6
B 27714/2
29.06.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9,018 tons - lbs	113.14 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230436
Contract 50005848

Dimensions: 323.80 x 10.31 mm - Schedule: 40 - Length: 10.00 - 11.80 m - - -

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	195	-	19.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1230912	Longitudinal Flat	50.8	-	40.00	-	10.80	-	432.0	-	23-1851	422.00	-	529.00	-	41.70	0.80
1230912	Longitudinal Flat	50.8	-	40.00	-	11.50	-	460.0	-	23-1851	425.00	-	533.00	-	42.90	0.80
1230912	Longitudinal Flat	-	-	20.00	-	10.70	-	214.0	-	23-1083	419.20	-	527.10	-	37.80	0.80
2303261	Longitudinal Flat	50.8	-	40.00	-	11.20	-	448.0	-	23-1851	424.00	-	531.00	-	42.10	0.80
2303261	Longitudinal Flat	-	-	20.00	-	11.00	-	220.0	-	23-1083	422.30	-	529.10	-	38.40	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T.°C			Shear Area min. %			Lateral Expansion min. mm		
1230912	23-2460	Transversal	10x7.5x55	0	-	154	143	133	20.0	143	-	-	-	95	95	95	1.27	1.26	1.17
1230912	23-2461	Longitudinal	10x7.5x55	-52	20.0	164	175	151	30.0	163	-	-	-	95	95	95	1.46	1.55	1.34
2303261	23-2460	Transversal	10x7.5x55	0	-	148	131	137	20.0	139	-	-	-	95	95	95	1.31	1.15	1.20
2303261	23-2461	Longitudinal	10x7.5x55	-52	20.0	158	145	167	30.0	157	-	-	-	95	95	95	1.41	1.28	1.49

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 10/07/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 11,74 HEAT 1230908 DIMENSIONS 323,8 x 10,31

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/6	B 27714/2	29.06.2023	ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 9.018 tons - lbs	Total Length: 113.14 meters - feets	Pieces 10	Bundles -
Buyer's reference PO NO. : OF230436	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Contract 50005848	Dimensions: 323.80 x 10.31 mm -		Schedule: 40			Length: 10.00 - 11.80 m -		- -	
Item: 5 / Item Client: -	Hydro Test:	Bar: 195	PSI: -	MPa: 19.5	Time(sec): 5	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -			

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1230912	23-1623	-	-	-	-	-	-	-	<20
1230912	23-1623	-	-	-	-	-	-	-	<20
2303261	23-1623	-	-	-	-	-	-	-	<20
2303261	23-1623	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 10/07/23

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 11,74 HEAT 1230908 DIMENSIONS 323,8 x 10,31

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 5/6
B 27714/2
29.06.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.018 tons - lbs	113.14 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230436
Contract 50005848

Dimensions: 323.80 x 10.31 mm - | Schedule: 40 | Length: 10.00 - 11.80 m - | -

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	195	-	19,5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1230912	23-613	450	295.10	-
2303261	23-613	450	302.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1230908	23-1741	OK
1230908	23-1741	OK
1230912	23-1741	OK
1230912	23-1741	OK
2303261	23-1741	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1230908	23-328	0	9
1230912	23-328	0	9
2303261	23-328	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
1230908	6	68.48	5459
1230912	3	33.03	2632
2303261	1	11.63	927

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 10/07/23

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 11,74 HEAT 1230908 DIMENSIONS 323,8 x 10,31

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL. 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -						Page 6/6 B 27714/2 29.06.2023	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES						Total weight: 9.018 tons - lbs	Total Length: 113.14 meters - feets	Pieces 10 / Bundles -
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Buyer's reference PO NO. : OF230436	Dimensions: 323.80 x 10.31 mm -		Schedule: 40				Length: 10.00 - 11.80 m -	- -	
Contract 50005848									

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
5	-		195	-	19.5	5	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman, Interpipe Europe SA(Producator: Dneprosteel Ucraina) Via San Salvatore 13, PO Box 745 CH-6902 PARADISO-LUGANO SWITZERLAND .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 10 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY CHECKED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

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Approved by QUALITY1 on 10/07/23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301642

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

04.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR E. BOTTI DATE 16 NOV 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 3 MT 32,9 HEAT 72584 DIMENSIONS 323,8 x 12,7

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/7
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18.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
20.654 tons - lbs	211.96 meters - feets	19	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. OF230668
Contract 50005988

Dimensions: 323.80 x 12.70 mm
-

Schedule: XS

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
72577		Heat analysis		0.16	1.20	0.20	0.004	0.015	0.10	0.05	0.17	0.024	0.01	0.062	0.002	0.001	0.0002	0.0100
72579		Heat analysis		0.15	1.22	0.23	0.003	0.015	0.11	0.05	0.17	0.022	0.01	0.062	0.002	0.001	0.0002	0.0100
72584		Heat analysis		0.14	1.23	0.22	0.004	0.015	0.05	0.05	0.16	0.031	0.01	0.067	0.002	0.001	0.0003	0.0075
72577	23-929	Product analysis		0.15	1.23	0.21	0.004	0.013	0.09	0.04	0.16	0.027	0.01	0.061	0.002	0.002	0.0002	0.0096
72577	23-929	Product analysis		0.15	1.22	0.22	0.004	0.013	0.09	0.05	0.16	0.027	0.01	0.062	0.002	0.002	0.0002	0.0097
72579	23-955	Product analysis		0.14	1.24	0.23	0.003	0.014	0.10	0.05	0.16	0.025	0.01	0.061	0.002	0.001	0.0002	0.0096
72579	23-955	Product analysis		0.14	1.25	0.22	0.003	0.013	0.10	0.05	0.16	0.025	0.01	0.061	0.002	0.001	0.0002	0.0098
72584	23-961	Product analysis		0.15	1.25	0.22	0.004	0.015	0.05	0.04	0.14	0.029	0.01	0.065	0.002	0.002	0.0001	0.0077
72584	23-961	Product analysis		0.15	1.26	0.22	0.004	0.014	0.05	0.03	0.14	0.030	0.01	0.064	0.002	0.002	0.0001	0.0076

BUREAU VERITAS ITALY REVIEWED SURVEYOR F.BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 02/11/23

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 3 MT 32,9 HEAT 72584 DIMENSIONS 323,8 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 2/7 B 28450/3 18.10.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 20.654 tons - lbs	Total Length: 211.96 meters - feets	Pieces 19	Bundles -

Buyer's reference: PO NO. : OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50005988	Dimensions: 323.80 x 12.70 mm - / Schedule: XS / Length: 10.00 - 11.80 m - / - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
72577		Heat analysis		2.40	0.064	0.065	0.345	0.41	0.28
72579		Heat analysis		2.20	0.064	0.065	0.355	0.40	0.29
72584		Heat analysis		4.13	0.069	0.070	0.290	0.38	0.22
72577	23-929	Product analysis		2.81	0.063	0.065	0.325	0.40	0.26
72577	23-929	Product analysis		2.78	0.064	0.066	0.326	0.40	0.26
72579	23-955	Product analysis		2.60	0.063	0.064	0.334	0.39	0.27
72579	23-955	Product analysis		2.55	0.063	0.064	0.334	0.40	0.27
72584	23-961	Product analysis		3.77	0.067	0.069	0.269	0.40	0.20
72584	23-961	Product analysis		3.95	0.066	0.068	0.268	0.40	0.20

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 02/11/23

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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18.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
20.654 tons - lbs	211.96 meters - feets	19	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 323.80 x 12.70 mm
-
Schedule: XS
Length: 10.00 - 11.80 m
-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
72577	Longitudinal Flat	50.8	-	40.00	-	13.50	-	540.0	-	23-2992	424.00	-	535.00	-	42.90	0.79
72577	Longitudinal Flat	50.8	-	40.00	-	14.20	-	568.0	-	23-2992	427.00	-	541.00	-	44.10	0.79
72577	Longitudinal Flat	-	-	20.00	-	13.20	-	264.0	-	23-1658	421.20	-	532.20	-	38.30	0.79
72579	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	23-2992	425.00	-	537.00	-	43.30	0.79
72579	Longitudinal Flat	-	-	20.00	-	13.70	-	274.0	-	23-1658	424.10	-	535.00	-	40.10	0.79
72584	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	23-2992	425.00	-	538.00	-	43.50	0.79
72584	Longitudinal Flat	50.8	-	40.00	-	14.00	-	560.0	-	23-2992	426.00	-	540.00	-	43.80	0.79
72584	Longitudinal Flat	-	-	20.00	-	13.90	-	278.0	-	23-1658	426.30	-	538.80	-	41.20	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
72577	23-3846	Transversal	10x10x55	0	-	231	217	202	27.0	217	-	-	-	100	100	100	1.97	1.92	1.80
72577	23-3847	Longitudinal	10x10x55	-52	27.0	225	249	236	40.0	237	-	-	-	100	100	100	1.94	2.05	2.00
72579	23-3846	Transversal	10x10x55	0	-	205	193	226	27.0	208	-	-	-	100	95	100	1.83	1.72	1.95
72579	23-3847	Longitudinal	10x10x55	-52	27.0	234	211	243	40.0	229	-	-	-	100	100	100	1.99	1.88	2.03
72584	23-3846	Transversal	10x10x55	0	-	223	237	210	27.0	223	-	-	-	100	100	100	1.94	2.00	1.87
72584	23-3847	Longitudinal	10x10x55	-52	27.0	253	227	240	40.0	240	-	-	-	100	100	100	2.07	1.95	2.02

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

BUREAU VERITAS ITALY
CHECKED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

Quality Control Representative

Formular 12A rev.9

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Approved by QUALITY1 on 02/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 3 MT 32,9 HEAT 72584 DIMENSIONS 323,8 x 12,7

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 28450/3
18.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
20.654 tons - lbs	211.96 meters - feets	19	-

Buyer's reference: PO NO. : OF230668
Contract 50005988

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 323.80 x 12.70 mm
-

Schedule: XS

Length: 10.00 - 11.80 m
-

-	-
-	-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
72577	23-3521	-	-	-	-	-	-	-	<20
72577	23-3521	-	-	-	-	-	-	-	<20
72579	23-3521	-	-	-	-	-	-	-	<20
72579	23-3521	-	-	-	-	-	-	-	<20
72584	23-3521	-	-	-	-	-	-	-	<20
72584	23-3521	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
INITIALED - POSED - REVIEWED
SURVEYOR F. BOTTI
DATE
16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 02/11/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 28450/3
18.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
20.654 tons - lbs	211.96 meters - feets	19	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference	PO NO. : OF230668
Contract	**50005988**

Dimensions: 323.80 x 12.70 mm - | Schedule: XS | Length: 10.00 - 11.80 m - | - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
72577	23-926	450	292.50	-
72579	23-926	450	296.10	-
72584	23-926	450	297.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
72577	23-2869	OK
72577	23-2869	OK
72579	23-2869	OK
72584	23-2869	OK
72584	23-2869	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
72577	23-507	0	9
72579	23-507	0	9
72584	23-507	0	9

BUREAU VERITAS ITALY [redacted] REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 02/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 3 MT 32,9 HEAT 72584 DIMENSIONS 323,8 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 6/7 B 28450/3 18.10.2023			ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 20.654 tons - lbs	Total Length: 211.96 meters - feets	Pieces 19	Bundles -
Buyer's reference PO NO. : OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Contract 50005988	Dimensions: 323.80 x 12.70 mm -		Schedule: XS			Length: 10.00 - 11.80 m -		-	-
Item: 12 / Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -			

Heat

Heat	Pieces	Length (m)	Weight (kg)
72577	7	80.51	7845
72579	1	11.59	1129
72584	11	119.86	11680

BUREAU VERITAS ITALY PASSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 02/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 3 MT 32,9 HEAT 72584 DIMENSIONS 323,8 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -						Page 7/7 B 28450/3 18.10.2023		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES						Total weight: 20.654 tons - lbs	Total Length: 211.96 meters - feets	Pieces 19 / Bundles -
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Buyer's reference PO NO. : OF230668	Dimensions: 323.80 x 12.70 mm -		Schedule: XS				Length: 10.00 - 11.80 m -		- -
Contract 50005988									
Item: 12	Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 12 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 02/11/23

Formular 12A rev.9

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301643

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **04.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV 2023

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000847 **Rev. N°:** 0 **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

809/ 3402

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 4 MT 46,7 HEAT 72583 DIMENSIONS 355,6 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/4 B 28506/1 30.09.2023	ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY
Buyer's reference	PO NO. : OF230668
Contract	50005988

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.255 tons - lbs	104.79 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 10.00 - 11.80 m -	- -

Item	Item Client
18	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
72583		Heat analysis		0.15	1.24	0.21	0.003	0.015	0.08	0.05	0.17	0.035	0.01	0.064	0.002	0.001	0.0003	0.0073
72581		Heat analysis		0.15	1.20	0.20	0.003	0.014	0.09	0.05	0.15	0.037	0.01	0.063	0.002	0.001	0.0003	0.0078
72583	23-908	Product analysis		0.15	1.26	0.23	0.003	0.014	0.08	0.04	0.16	0.037	0.01	0.063	0.001	0.001	0.0002	0.0075
72583	23-908	Product analysis		0.15	1.27	0.22	0.003	0.013	0.08	0.04	0.17	0.036	0.01	0.063	0.001	0.001	0.0002	0.0076
72581	23-924	Product analysis		0.15	1.23	0.21	0.003	0.012	0.08	0.04	0.14	0.035	0.01	0.062	0.001	0.001	0.0002	0.0081
72581	23-924	Product analysis		0.15	1.22	0.22	0.003	0.012	0.08	0.05	0.14	0.036	0.01	0.062	0.001	0.001	0.0002	0.0079

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
72583		Heat analysis		4.79	0.066	0.067	0.327	0.40	0.26
72581		Heat analysis		4.74	0.065	0.066	0.316	0.40	0.25
72583	23-908	Product analysis		4.93	0.064	0.065	0.315	0.40	0.25
72583	23-908	Product analysis		4.74	0.064	0.065	0.325	0.41	0.26
72581	23-924	Product analysis		4.32	0.063	0.064	0.294	0.40	0.23
72581	23-924	Product analysis		4.56	0.063	0.064	0.294	0.40	0.23

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 16/10/23

811/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28506/1
30.09.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.255 tons - lbs	104.79 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 355.60 x 12.70 mm
-

Schedule: XS

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
18	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
72583	Longitudinal Flat	50.8	-	40.00	-	14.00	-	560.0	-	23-2862	425.00	-	536.00	-	43.60	0.79
72583	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	23-2862	424.00	-	534.00	-	43.10	0.79
72583	Longitudinal Flat	-	-	20.00	-	13.80	-	276.0	-	23-1608	424.30	-	535.10	-	41.60	0.79
72581	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	23-2862	424.00	-	535.00	-	43.30	0.79
72581	Longitudinal Flat	50.8	-	40.00	-	13.50	-	540.0	-	23-2862	423.00	-	533.00	-	42.90	0.79
72581	Longitudinal Flat	-	-	20.00	-	13.40	-	268.0	-	23-1608	422.00	-	533.20	-	40.50	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
72583	23-3684	Transversal	10x10x55	0	-	193	174	208	27.0	192	-	-	-	95	95	100	1.72	1.56	1.85
72583	23-3685	Longitudinal	10x10x55	52	27.0	214	202	227	40.0	214	-	-	-	100	100	100	1.89	1.81	1.95
72581	23-3684	Transversal	10x10x55	0	-	205	193	181	27.0	193	-	-	-	100	95	95	1.83	1.72	1.62
72581	23-3685	Longitudinal	10x10x55	52	27.0	199	211	224	40.0	211	-	-	-	95	100	100	1.78	1.87	1.93

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

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Approved by QUALITY1 on 16/10/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 4 MT 46,7 HEAT 72583 DIMENSIONS 355,6 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 3/4 B 28506/1 30.09.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 11.255 tons - lbs	Total Length: 104.79 meters - feets	Pieces 9	Bundles -

Buyer's reference: PO NO. : OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;		
Contract 50005988	Dimensions: 355.60 x 12.70 mm -	Schedule: XS	Length: 10.00 - 11.80 m - - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
18	-		205	-	20.5	10	

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
72583	23-3419	-	-	-	-	-	-	-	<20
72583	23-3419	-	-	-	-	-	-	-	<20
72581	23-3419	-	-	-	-	-	-	-	<20
72581	23-3419	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
72583	23-891	450	296.10	-
72581	23-891	450	291.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
72583	23-2740	OK
72583	23-2740	OK
72581	23-2740	OK
72581	23-2740	OK

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
72583	23-488	0	9
72581	23-488	0	9

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 16/10/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 4 MT 46,7 HEAT 72583 DIMENSIONS 355,6 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 28506/1 30.09.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 11.255 tons - lbs	Total Length: 104.79 meters - feets	Pieces 9	Bundles -

Buyer's reference PO NO. : OF230668	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50005988	Dimensions: 355.60 x 12.70 mm - / Schedule: XS / Length: 10.00 - 11.80 m - / - -

Item	Item Client
18	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
72583	5	58.25	6256
72581	4	46.54	4999

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Județ Hunedoara, ROMANIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 14 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY NOTED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 16/10/23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301644

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **04.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR E. BOTTI DATE 16 NOV 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY
WITNESSED ~~TESTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 6 MT 69,16 HEAT 816252 DIMENSIONS 406,4 x 12.7

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 28437/6
07.11.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.816 tons - lbs	103.94 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17 07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668

Contract 50005988

Dimensions: 406.40 x 12.70 mm
-

Schedule: XS/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
21	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	192	-	19.2	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
816252		Heat analysis		0.14	1.27	0.21	0.002	0.009	0.07	0.08	0.10	0.030	0.02	0.065	0.002	0.004	0.0001	0.0100
816252	23-996	Product analysis		0.13	1.26	0.20	0.002	0.008	0.06	0.07	0.10	0.030	0.02	0.064	0.002	0.004	0.0001	0.0100
816252	23-996	Product analysis		0.13	1.26	0.20	0.002	0.008	0.06	0.08	0.10	0.030	0.02	0.064	0.002	0.004	0.0001	0.0100

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
816252		Heat analysis		3.00	0.067	0.071	0.261	0.39	0.19
816252	23-996	Product analysis		3.00	0.066	0.070	0.248	0.38	0.18
816252	23-996	Product analysis		3.00	0.066	0.070	0.250	0.38	0.18

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY
~~IN PRODUCTION~~ REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 14/11/23

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28437/6
07.11.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.816 tons - lbs	103.94 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference	PO NO. : OF230668
Contract	**50005988**

Dimensions: 406.40 x 12.70 mm - | Schedule: XS/40 | Length: 10.00 - 11.80 m - | -

Item	Item Client
21	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	192	-	19.2	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
816252	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	23-3058	425.00	-	537.00	-	43.20	0.79
816252	Longitudinal Flat	50.8	-	40.00	-	14.20	-	568.0	-	23-3058	427.00	-	543.00	-	44.10	0.79
816252	Longitudinal Flat	-	-	20.00	-	13.50	-	270.0	-	23-1725	423.00	-	535.20	-	41.20	0.79
816252	Longitudinal Flat	50.8	-	40.00	-	13.40	-	536.0	-	23-3135	418.00	-	529.00	-	41.90	0.79
816252	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	23-3135	422.00	-	531.00	-	42.30	0.79
816252	Longitudinal Flat	-	-	20.00	-	13.00	-	260.0	-	23-1783	412.30	-	525.40	-	38.30	0.78

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T.°C			Shear Area min. %			Lateral Expansion min. mm		
816252	23-3946	Transversal	10x10x55	0	-	226	207	239	27.0	224	-	-	-	100	100	100	1.94	1.85	2.00
816252	23-3947	Longitudinal	10x10x55	-52	27.0	256	230	244	40.0	243	-	-	-	100	100	100	2.08	1.98	2.03
816252	23-4090	Transversal	10x10x55	0	-	199	211	224	27.0	211	-	-	-	95	100	100	1.77	1.88	1.94
816252	23-4091	Longitudinal	10x10x55	-52	27.0	231	248	219	40.0	233	-	-	-	100	100	100	1.98	2.06	1.92

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 14/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 6 MT 69,16 HEAT 816252 DIMENSIONS 406,4 x 12,7

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 3/4 **B 28437/6** **07.11.2023**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 12.816 tons - lbs	Total Length: 103.94 meters - feets	Pieces: 9 / Bundles: -
Buyer's reference: PO NO. : OF230668 **Contract 50005988**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;			
Dimensions: 406.40 x 12.70 mm -	Schedule: XS/40	Length: 10.00 - 11.80 m -	- / -	

Item	Item Client
21	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	192	-	19.2	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
816252	23-3573	-	-	-	-	-	-	-	<20
816252	23-3573	-	-	-	-	-	-	-	<20
816252	23-3638	-	-	-	-	-	-	-	<20
816252	23-3638	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
816252	23-954	450	292.80	-
816252	23-992	450	290.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
816252	23-2926	OK
816252	23-2926	OK
816252	23-3022	OK
816252	23-3022	OK

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
816252	23-521	0	9
816252	23-546	0	9

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 14/11/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 28437/6 07.11.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 12.816 tons - lbs	Total Length: 103.94 meters - feets	Pieces: 9	Bundles: -

Buyer's reference: PO NO. : OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50005988	Dimensions: 406.40 x 12.70 mm - / Schedule: XS/40 / Length: 10.00 - 11.80 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
21	-		192	-	19.2	10	

Heat

Heat	Pieces	Length (m)	Weight (kg)
816252	9	103.94	12816

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX I, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 16 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.



We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 14/11/23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723001797	123A90A	Q012301646

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **04.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,31	LIBERTY OSTRAVA	56110K	73555/23
				1	9,36	LIBERTY OSTRAVA	56110K	73555/23
				1	9,29	LIBERTY OSTRAVA	56110K	73555/23
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
			Total:	**4**	**36,88**			
20000		323,8X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	1230908	B 27714/2
			Total:	**1**	**11,74**			
30000		323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,78	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,07	ARCELORMITTAL ROMAN	72584	B 28450/3
				1	11,05	ARCELORMITTAL ROMAN	72584	B 28450/3

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV 2023

824/ 3402

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**3**	**32,9**			
40000		355,6X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,75	ARCELORMITTAL ROMAN	72583	B 28506/1
				1	11,45	ARCELORMITTAL ROMAN	72583	B 28506/1
			Total:	**4**	**46,7**			
50000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,6	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,49	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,55	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,45	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,51	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,56	ARCELORMITTAL ROMAN	816252	B 28437/6

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR DATE 16 NOV. 2023

825/ 3402

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000847** **Rev. N°:** **0** **Date:**

Inspection Date: 15/11/2023

Ref.: 1723001797 123A90A

Our Job n. 323002693

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**6**	**69,16**			
60000		406,4X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,52	ARCELORMITTAL ROMAN	816252	B 28437/6
				1	11,63	ARCELORMITTAL ROMAN	816252	B 28437/6
			Total:	**3**	**34,78**			
70000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,75	ARCELORMITTAL ROMAN	72580	B 28684/1
			Total:	**1**	**9,75**			

BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 9,75 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer:	MILL TEST CERTIFICATE	Page 1/4	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.1/2004 -	B 28684/1 26.10.2023	

Buyer:		Total weight:	Total Length:	Pieces	Bundles
T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	1.985 tons - lbs	9.75 meters - feets	1	-

Buyer's reference	PO NO. : OF230668
Contract	50005988

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 406.40 x 21.44 mm -	Schedule: 80	Length: 8.00 - 10.00 m -	-

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
72580		Heat analysis		0.15	1.23	0.22	0.003	0.012	0.07	0.05	0.14	0.036	0.01	0.063	0.001	0.001	0.0002	0.0068
72580	23-1002	Product analysis		0.15	1.22	0.20	0.003	0.012	0.06	0.04	0.14	0.035	0.01	0.062	0.001	0.001	0.0002	0.0066
72580	23-1002	Product analysis		0.15	1.22	0.20	0.003	0.012	0.06	0.05	0.13	0.035	0.01	0.062	0.001	0.001	0.0002	0.0065

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
72580		Heat analysis		5.29	0.064	0.065	0.285	0.40	0.22
72580	23-1002	Product analysis		5.30	0.063	0.064	0.274	0.39	0.21
72580	23-1002	Product analysis		5.38	0.063	0.064	0.264	0.39	0.20

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY REVIEWED REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 03/11/23

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 9,75 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28684/1
26.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.985 tons - lbs	9.75 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668

Contract 50005988

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
23	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
72580	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3060	404.00	-	519.00	-	37.20	0.78
72580	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3060	397.00	-	521.00	-	36.30	0.76
72580	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	23-1727	394.90	-	514.60	-	33.30	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
72580	23-3950	Transversal	10x10x55	0	-	216	229	200	27.0	215	-	-	-	100	100	100	1.91	1.97	1.79
72580	23-3951	Longitudinal	10x10x55	-52	27.0	236	245	220	40.0	234	-	-	-	100	100	100	1.99	2.04	1.93

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
72580	23-3575	-	-	-	-	-	-	-	<20
72580	23-3575	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 03/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 9,75 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 28684/1
26.10.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.985 tons - lbs	9.75 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table YI; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
23	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
72580	23-956	450	290.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
72580	23-2928	OK
72580	23-2928	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
72580	23-523	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
72580	1	9.75	1985

BUREAU VERITAS
ITALY
REVIEWED
SURVEYOR F. BOTTI
DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 03/11/23

ROSETTI MARINO S.P.A. P.O.1723001797 123A90A TAL JOB N°323002693
N° 1 MT 9,75 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4 B 28684/1 26.10.2023		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY		SEAMLESS STEEL LINE PIPES					Total weight: 1.985 tons - lbs	Total Length: 9.75 meters - feets	Pieces: 1 / Bundles: -
Buyer's reference: PO NO. : OF230668		**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no 9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
Contract 50005988		Dimensions: 406.40 x 21.44 mm -		Schedule: 80			Length: 8.00 - 10.00 m -		- -
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		
23	-		205	-	20.5	10			

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 26 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 16 NOV. 2023

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 03/11/23

Formular 12A rev 9

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
GABRIELLI SPA UNIPERSONALE	1723001231	123A40C	Q012301647

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

gabrielli
steel service centre

Gabrielli S.p.A. - Società Unipersonale
Sede legale e amministrativa: Via Mazzini, 58
35013 Cittadella (PD) Italy - C.P. n. 52/B
Tel. +39.049.9414611 - Fax +39.049.9414664
Deposito Marghera: Via dei Sali, 3 - 30175 Marghera (VE)

Cap. Soc. Euro 20.000.000,00 I. V.
Reg. Impr. PD 00362740284 - R.E.A. PD120850 M
PD005320 - **C.F. e P. IVA: IT 00362740284**
e-mail: info.gab@gabrielli.it
www.gabrielli.it

GRUPPO gabrielli
STEEL SERVICE NETWORK

Covolo di Pederobba, 06/12/2023

(54110)
Spett.le Ditta
ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA
RA

Oggetto: Certificati

Con la presente Vi trasmettiamo in allegato copie conformi agli originali dei certificati e/o eventuali attestati di conformità inerenti i documenti di trasporto di seguito elencati:

DDT: 23005413 del 05/12/2023

Direzione e coordinamento SO.FI.D.A. S.p.A.

Distinti Saluti

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi

Divisione Coils
35013 Cittadella (PD) Italy - Via Mazzini, 58
Tel. +39.049.9414781
Comparto Bassarena: Via Bassarena, 8/C
e-mail: info.dco@gabrielli.it

Divisione Lamiere Grosse
35013 Cittadella (PD) Italy
Via dell'Industria, 38 - Z.I.
Tel. +39.049.9415511
e-mail: info.dlg@gabrielli.it

Divisione Lunghi
35015 Galliera Veneta (PD) Italy - Via Leonardo da Vinci, 25 - Tel. +39.049.5968844
31040 Covolo di Pederobba (TV) Italy - Via Guizza, 25 - Tel. +39.0423.680411
36040 Grumolo delle Abbadesse (VI) Italy - Via Nazionale, 82 - Tel. +39.0444.580680
e-mail: info.dpl@gabrielli.it

Gabrielli S.p.A. - Società Unipersonale
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C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo / Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
1 | TRAVE IPE 180 S355J2 EN10025-2										
02300089800073	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900030	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900026	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000074	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700024	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800081	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900069	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700025	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800076	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700030	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800077	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800065	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000070	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000026	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000060	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700020	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000041	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000016	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga	Articolo										
Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore	
02300089800059	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000069	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000073	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300088900014	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000050	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700029	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700023	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089800060	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700027	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700021	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000040	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089800063	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300088900047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300088900018	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000066	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000061	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000021	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000022	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700017	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300088900017	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000031	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300088900060	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089000051	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	
02300089700015	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH	

Gabrielli S.p.A. - Società Unipersonale
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Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga / Matricola	Articolo Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900061	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900063	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000035	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000020	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000036	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800080	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900045	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900072	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900019	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000045	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900064	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900071	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000065	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

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Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089700016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000025	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900036	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900051	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000019	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700013	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700026	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000030	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900035	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900055	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900067	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800070	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900040	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800071	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000055	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800082	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

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Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900068	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000063	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800066	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900021	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700014	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800078	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000056	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900070	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800079	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900025	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800062	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000072	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000067	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000018	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800064	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000064	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800069	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700018	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

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Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
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Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo

Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900050	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800072	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900020	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900013	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000014	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000068	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000017	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700019	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900065	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900046	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000046	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900031	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800075	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900056	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000071	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900066	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

gabrielli
steel service centre

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga / Matricola	Articolo / Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089800061	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700028	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800074	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800068	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000013	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800083	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900041	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800067	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1485/5-2023**
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	69287	IPE 180	EN 10365	18.100 mm	78	26.615 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
69287	0,09	0,19	1,42	0,018	0,015	0,012	0,017	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
69287	0,25	0,11	0,03	0,017	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
69287	383	549	27,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
69287	KV 450/7.5	L	-20 °C	14 / 20	97	113	130	113

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51575 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1485/5-2023**
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA2302550 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'O842/3402E

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

843/3402

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
CIMOLAI SPA	1723001802	123A90A	Q012301848

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec — P.O.
According to the spc.

TMUGF Firma — Data
MTSMD Signature — Date

06.03.2024

PAOLO ANCARANI
[X] REVIEW
[ ] WITNESS

CUSTOMER

CIMOLAI
Pordenone - Italy
Plant: San Giorgio di Nogaro (UD)

INSPECTION TEST CERTIFICATE 3.1 (EN 10204:2005)

CERTIFICATO DI CONTROLLO 3.1 (EN 10204:2005)

CERT. No. / *ATTESTATO No.* 2023263/VIS/03 rev. 00
DATE - *DATA* 24/01/24
PAGE - *PAGINA* 1 di 2

CLIENT / *CLIENTE* **Rosetti Marino S.p.A.**
Cimolai JOB / *COMMESSA CIMOLAI* **2023263**
P.O. No. / *Nr. ORDINE* **1723001802 rev. 01**
PROJECT / *PROGETTO* **HOLLANDSE KUST NOORD WIND PARK Project**

We declare that the material hereunder listed has been produced and controlled in accordance with P.O. 1723001802 rev. 01 and documents referenced therein.

Order specifications: **123A90-DDL-ST-SP-90018_Str.mat specification; K559-2254-MT-SPE-001 - Fabrication Specification rev. 01**

PIPE ID: See below
TYPE of PIPES: SAWL Pipes
GRADE: See table below
DELIVERY CONDITION: normalized rolled
ORIGIN OF PLATES: Metinvest Trametal Spa, Via Enrico Fermi, 44, 33058 San Giorgio di Nogaro UD - Italy
ENDS: Square ends

PIPES DESCRIPTION AND TEST REPORTS TRACEABILITY

P.O. ITEM	Pipe ID	Nominal Dimensions [mm]	Grade	Heat Number	Plate Number	Plate certificate number	Plate Supplier	Vis. and Dim. Report Number	VT Report Number	MT Report Number	UT Report Number	RT Report Number
40	23-3135	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24695	147524/1	1191706.1	VOESTALPINE	2023263-DIM-23-3135	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3136	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147476/1	1191706.1	VOESTALPINE	2023263-DIM-23-3136	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3137	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147474/1	1191706.1	VOESTALPINE	2023263-DIM-23-3137	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3138	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147527/1	1191706.1	VOESTALPINE	2023263-DIM-23-3138	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3139	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	53565	147465/1	1191706.1	VOESTALPINE	2023263-DIM-23-3139	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3140	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	53565	147467/1	1191706.1	VOESTALPINE	2023263-DIM-23-3140	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3141	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	24964	147477/1	1191706.1	VOESTALPINE	2023263-DIM-23-3141	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3142	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	24964	147478/1	1191706.1	VOESTALPINE	2023263-DIM-23-3142	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3144/d	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170991/1	A0376103	VOESTALPINE	2023263-DIM-23-3144/d	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3145	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3145	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3146	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3146	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3147	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3147	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01

Hydrotests:
Not Appplicable

Mechanical test reports:
30848 dated 19.01.2024

Additional Notes:
Not applicable

Manufacturer Signature	Customer Signature	Third party signature	Final Client Signature	Other Signature

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301573

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

71885

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2
N142C4ED-4

Z02 Date 15-05-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376103/A	A08 Order-No.:	3500317	A07 OrderDat.	09-03-2023	Date of dispatch	15-05-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo.
6869

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product: Plate
B02 Material: S460MLO
B03 Standard: EN 10225-1 : 2019
Supplementary requirements: Z35 - EN 10164
B04 Delivery condition: thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
751806	174546/1	30	20,00	3050,0	12000	1		5.831	83043	S460MLOVAS
754265	170980/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170980/1	20	20,00	3000,0	11206	1		5.396	83043	S460MLOVAS
754265	170981/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170981/1	20	20,00	3000,0	12000	1		5.790	83043	S460MLOVAS
754272	170903/1	80	40,00	2500,0	12000	1		9.576	83043	S460MLOVAS
754272	170921/1	70	30,00	3000,0	12000	1		8.628	83043	S460MLOVAS
754272	170922/1	70	30,00	3000,0	12000	1		8.625	83043	S460MLOVAS
754272	171630/1	60	30,00	2051,0	12000	1		5.891	83043	S460MLOVAS
754272	171630/2	60	30,00	2051,0	11780	1		5.772	83043	S460MLOVAS
754582	168790/1	120	50,00	2500,0	12000	1		12.069	83041	S460MLOVAS
754582	168792/1	120	50,00	2500,0	12000	1		12.079	83041	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No		Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
754582	168793/1		140	50,00	3000,0	12000	1		14.473	83043	S460MLOVAS
754582	168794/1		140	50,00	3000,0	12000	1		14.440	83043	S460MLOVAS
755680	176964/1		80	40,00	2500,0	12000	1		9.574	83043	S460MLOVAS
859727	168580/1		100	50,00	2051,0	12000	1		9.832	83043	S460MLOVAS
860447	171382/1		170	60,00	2051,0	12000	1		11.854	83043	S460MLOVAS
860447	171383/1		170	60,00	2051,0	12000	1		11.855	83043	S460MLOVAS
860758	168375/1		150	50,00	3000,0	16000	1		19.211	83043	S460MLOVAS
860758	168376/1		150	50,00	3000,0	16000	1		19.230	83043	S460MLOVAS
860758	168777/1		130	50,00	2500,0	16000	1		16.102	83043	S460MLOVAS
860758	168779/1		160	50,00	3050,0	12000	1		14.703	83043	S460MLOVAS
860758	168781/1		160	50,00	3050,0	12000	1		14.611	83043	S460MLOVAS
860758	170951/2	ITEM 60	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
860758	170951/1		50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
860758	170952/2		50	25,00	2500,0	12000	1		6.015	83043	S460MLOVAS
860758	170952/1		50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
860758	170955/2	3 ITEM	50	25,00	2500,0	12000	1		5.991	83043	S460MLOVAS
860758	170955/1	3 110	50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
861322	170953/1		50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170953/2		50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170954/2		50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861322	170954/1	ITEM 60	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861323	168795/1		100	50,00	2051,0	12000	1		9.909	83043	S460MLOVAS
861323	170924/2		40	25,00	2051,0	11872	1		4.857	83043	S460MLOVAS
861323	170924/1		40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
861323	170925/1		40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861323	170925/2		40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861325	171932/1		180	60,00	2500,0	16000	1		19.232	83043	S460MLOVAS
861662	171628/1		100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
861662	171629/1		60	30,00	2051,0	12000	1		5.903	83043	S460MLOVAS
861662	171629/2		60	30,00	2051,0	12000	1		5.902	83043	S460MLOVAS
861665	171889/1		130	50,00	2500,0	16000	1		16.000	83043	S460MLOVAS
861927	170961/1		80	40,00	2500,0	12000	1		9.559	83043	S460MLOVAS
861927	170985/2		20	20,00	3000,0	12000	1		5.795	83043	S460MLOVAS
861927	170985/1		20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
861927	170986/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170986/1	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/1	20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS
861927	170988/1	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170988/2	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170989/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170989/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170990/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170990/1 } ITEM 30	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/1 }	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170992/1 } ITEM 100	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170992/2 }	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170993/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170993/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	173123/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173123/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173125/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
861928	170994/1	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170994/2	10	20,00	2500,0	12000	1		4.829	83043	S460MLOVAS
861928	170995/1	10	20,00	2500,0	12000	1		4.831	83043	S460MLOVAS
861928	170995/2	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170996/2	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170996/1	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170997/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861928	170997/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
948013	170901/1	90	40,00	3000,0	12000	1		11.490	83043	S460MLOVAS
948013	170902/1	90	40,00	3000,0	12000	1		11.465	83043	S460MLOVAS
948018	170978/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948018	170978/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
948018	170979/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948056	168379/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS
948056	168380/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
948056	168579/1	100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
948257	170927/1	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170927/2	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170928/2	30	20,00	3050,0	12000	1		5.889	83043	S460MLOVAS
948257	170928/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948257	172093/1	30	20,00	3050,0	12000	1		5.911	83043	S460MLOVAS
948257	172093/2	30	20,00	3050,0	11013	1		5.416	83043	S460MLOVAS
948259	170926/1	40	25,00	2051,0	12000	1		4.918	83043	S460MLOVAS
948259	170926/2	40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
948259	170956/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948259	170956/1	30	20,00	3050,0	12000	1		5.890	83043	S460MLOVAS
949159	169974/1	200	65,00	2500,0	12000	1		15.639	83043	S460MLOVAS
949159	171931/1	190	60,00	2800,0	16000	1		21.513	83043	S460MLOVAS
		Sum				93		722.807		

B14 - Supplementary information

length-deviation for plate(s) 170924/2, 170980/1, 171630/2, 172093/2: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
751806	.037	.329	1.620	.006	.0007	.032	.175	.170	.006	.170	.003	.036	.010	.0070	.0003	.0020	.0023	.0020	.0020	.0020	.37
754265	.037	.331	1.620	.008	.0004	.034	.168	.170	.005	.162	.005	.036	.011	.0053	.0005	.0020	.0014	.0020	.0020	.0020	.36
754272	.028	.340	1.620	.007	.0005	.034	.183	.170	.006	.163	.004	.034	.012	.0046	.0002	.0020	.0016	.0020	.0020	.0020	.36
754582	.027	.342	1.610	.006	.0006	.039	.174	.170	.009	.192	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020	.0020	.36
755680	.029	.317	1.600	.006	.0005	.031	.172	.170	.006	.159	.004	.037	.011	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.35
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
860447	.058	.395	1.540	.008	.0004	.037	.175	.280	.019	.164	.004	.026	.011	.0053	.0002	.0020	.0031	.0020	.0020	.0020	.38
860758	.031	.327	1.600	.005	.0004	.038	.169	.190	.006	.160	.004	.035	.012	.0047	.0002	.0020	.0015	.0020	.0020	.0020	.36
861322	.035	.327	1.590	.005	.0005	.032	.164	.170	.006	.164	.004	.035	.012	.0051	.0002	.0020	.0014	.0020	.0020	.0020	.36
861323	.031	.341	1.620	.005	.0005	.034	.189	.180	.009	.162	.004	.038	.012	.0047	.0003	.0030	.0017	.0020	.0020	.0020	.36
861325	.053	.190	1.540	.006	.0008	.033	.188	.510	.119	.018	.004	.027	.012	.0043	.0002	.0020	.0009	.0020	.0020	.0020	.41
861662	.034	.356	1.630	.007	.0007	.034	.181	.170	.008	.160	.004	.036	.011	.0057	.0002	.0020	.0017	.0020	.0020	.0020	.37
861665	.031	.338	1.610	.006	.0007	.042	.185	.190	.006	.165	.004	.035	.012	.0045	.0003	.0020	.0019	.0020	.0020	.0020	.36
861927	.032	.317	1.610	.008	.0006	.033	.180	.170	.007	.165	.004	.036	.012	.0052	.0003	.0020	.0015	.0020	.0020	.0020	.36
861928	.031	.310	1.610	.006	.0005	.032	.176	.170	.006	.162	.003	.038	.012	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.36
948013	.032	.337	1.630	.006	.0007	.035	.188	.170	.005	.158	.004	.038	.014	.0059	.0003	.0020	.0015	.0020	.0020	.0020	.36
948018	.032	.335	1.610	.007	.0004	.038	.173	.170	.007	.161	.004	.039	.012	.0055	.0002	.0030	.0012	.0020	.0020	.0020	.36
948056	.034	.341	1.620	.008	.0004	.036	.172	.170	.008	.158	.004	.035	.012	.0059	.0002	.0020	.0024	.0020	.0020	.0020	.36
948257	.031	.309	1.610	.006	.0006	.036	.173	.170	.008	.161	.004	.035	.012	.0058	.0002	.0060	.0024	.0020	.0020	.0020	.36
948259	.037	.326	1.620	.006	.0003	.039	.172	.170	.007	.162	.003	.033	.011	.0057	.0002	.0020	.0018	.0020	.0020	.0020	.37
949159	.054	.183	1.540	.007	.0012	.030	.189	.520	.119	.022	.004	.027	.011	.0044	.0002	.0020	.0009	.0020	.0020	.0020	.41

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
751806	.15	.039	.049	4.57
754265	.15	.041	.052	6.42
754272	.14	.038	.050	7.39
754582	.14	.039	.050	7.96
755680	.14	.041	.052	7.75
859727	.15	.039	.050	6.11
860447	.17	.030	.041	6.98
860758	.14	.039	.051	8.09
861322	.15	.039	.051	6.27
861323	.15	.042	.054	7.23
861325	.16	.031	.043	7.67
861662	.15	.040	.051	5.96
861665	.15	.039	.051	9.33
861927	.15	.040	.052	6.35
861928	.14	.041	.053	8.00
948013	.15	.042	.056	5.93
948018	.15	.043	.055	6.91
948056	.15	.039	.051	6.10
948257	.14	.039	.051	6.21
948259	.15	.036	.047	6.84
949159	.17	.031	.042	6.82

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							440	520		17.0			
Set values <=								700			93.00		
751806	174546	30,0	20.06	F	O	T	546	625	A5	19.4	87.38		
754265	170981	30,0	20.20	F	O	T	610	694	A5	18.5	87.80		
860758	170952	30,0	25.53	F	O	T	551	601	A5	22.4	91.61		
	170955	30,0	25.50	F	O	T	529	588	A5	22.9	89.96		
861322	170953	30,0	25.39	F	O	T	559	616	A5	22.0	90.69		
	170954	30,0	25.82	F	O	T	560	614	A5	22.2	91.27		
861323	170924	30,0	25.41	F	O	T	572	615	A5	22.9	92.98		
861927	170986	30,0	20.51	F	O	T	541	634	A5	23.7	85.35		
	170990	30,0	20.69	F	O	T	553	614	A5	20.9	90.03		
	170992	30,0	20.59	F	O	T	537	630	A5	20.8	85.32		
	173123	30,0	20.48	F	O	T	550	616	A5	20.1	89.23		
	173125	30,0	20.58	F	O	T	541	605	A5	19.8	89.44		
861928	170995	30,0	20.60	F	O	T	544	616	A5	20.1	88.36		
	170996	30,0	20.53	F	O	T	549	616	A5	21.7	89.01		
948018	170978	30,0	20.50	F	O	T	548	649	A5	21.3	84.46		
948257	170927	30,0	20.79	F	O	T	554	649	A5	20.2	85.42		
	170928	30,0	20.33	F	O	T	539	650	A5	22.8	82.98		
948259	170926	30,0	25.58	F	O	T	550	602	A5	26.2	91.36		
	170956	30,0	20.28	F	O	T	545	651	A5	20.5	83.78		
Set values >=							420	520		17.0			
Set values <=								700			93.00		
754272	170903	30,0	40.86	F	O	T	522	604	A5	22.4	86.45		
	170921	30,0	30.46	F	O	T	530	585	A5	23.4	90.60		
755680	176964	30,0	40.84	F	O	T	507	590	A5	23.5	85.93		
861662	171629	30,0	30.57	F	O	T	531	600	A5	22.6	88.49		
861927	170961	30,0	40.71	F	O	T	542	628	A5	21.4	86.37		
948013	170902	30,0	40.71	F	O	T	547	632	A5	21.1	86.58		
Set values >=							415	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							415	500		17.0			
Set values <=								675			93.00		
754582	168790	Ø	9.98	F	V	T	503	584	A5	25.2	85.99		
	168793	Ø	9.99	F	V	T	501	585	A5	25.8	85.63		
	168794	Ø	10.00	F	V	T	504	588	A5	28.6	85.70		
	168790	Ø	10.00	F	V	T	518	591	A5	27.1	87.51	001	1
	168793	Ø	10.00	F	V	T	507	580	A5	27.1	87.45	001	1
	168794	Ø	10.00	F	V	T	508	581	A5	28.8	87.48	001	1
859727	168580	Ø	10.03	F	V	T	461	594	A5	30.3	77.73		
	168580	Ø	10.03	F	V	T	513	592	A5	30.3	86.66	001	1
860447	171382	Ø	10.03	F	V	T	432	588	A5	27.3	73.54		
	171382	Ø	10.01	F	V	T	482	577	A5	28.3	83.48	001	1
860758	168375	Ø	9.99	F	V	T	428	516	A5	32.1	83.00		
	168777	Ø	9.99	F	V	T	517	590	A5	27.1	87.53		
	168781	Ø	9.98	F	V	T	495	590	A5	27.4	83.82		
	168375	Ø	10.01	F	V	T	503	582	A5	28.3	86.42	001	1
	168777	Ø	10.00	F	V	T	512	586	A5	25.9	87.51	001	1
	168781	Ø	9.99	F	V	T	504	583	A5	24.6	86.46	001	1
861323	168795	Ø	10.00	F	V	T	493	602	A5	28.1	81.97		
	168795	Ø	10.00	F	V	T	526	598	A5	27.1	87.90	001	1
861325	171932	Ø	10.01	F	V	T	429	564	A5	28.0	76.16		
	171932	Ø	10.00	F	V	T	476	564	A5	28.3	84.32	001	1
861662	171628	Ø	10.01	F	V	T	471	589	A5	28.9	79.89		
	171628	Ø	10.00	F	V	T	542	620	A5	25.0	87.38	001	1
861665	171889	Ø	10.02	F	V	T	504	603	A5	28.3	83.58		
	171889	Ø	9.98	F	V	T	518	597	A5	27.5	86.69	001	1
948056	168380	Ø	9.99	F	V	T	492	602	A5	29.7	81.74		
	168380	Ø	10.01	F	V	T	521	600	A5	28.6	86.71	001	1
949159	171931	Ø	10.01	F	V	T	455	592	A5	25.4	76.91		
	171931	Ø	9.98	F	V	T	493	582	A5	27.7	84.75	001	1
Set values >=							405	500		17.0			
Set values <=								675			93.00		
949159	169974	Ø	10.03	F	V	T	452	587	A5	25.7	77.04		
	169974	Ø	10.02	F	V	T	505	593	A5	26.3	85.18	001	1

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							405	500		17.0			
Set values <=								675			93.00		

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
751806	174546	CV 10x10	F	O	T	-40	336	344	329	336			
754265	170981	CV 10x10	F	O	T	-40	253	296	323	291			
754272	170903	CV 10x10	F	O	T	-40	325	336	351	338			
	170921	CV 10x10	F	O	T	-40	365	364	340	356			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
754582	168790	CV 10x10	F	O	T	-40	355	346	365	355			
	168793	CV 10x10	F	O	T	-40	357	371	367	365			
	168794	CV 10x10	F	O	T	-40	364	380	361	368			
	168790	CV 10x10	F	O	T	-40	318	335	335	329	001	1	
	168793	CV 10x10	F	O	T	-40	337	329	310	325	001	1	
	168794	CV 10x10	F	O	T	-40	342	299	352	331	001	1	
	168790	CV 10x10	F	K	T	-40	361	365	359	362			
	168793	CV 10x10	F	K	T	-40	391	46	350	262			
	168794	CV 10x10	F	K	T	-40	382	403	401	395			
	168790	CV 10x10	F	K	T	-40	317	322	313	318	001	1	
	168793	CV 10x10	F	K	T	-40	356	309	320	328	001	1	
	168794	CV 10x10	F	K	T	-40	360	309	322	330	001	1	
755680	176964	CV 10x10	F	O	T	-40	375	358	361	364			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
859727	168580	CV 10x10	F	O	T	-40	384	337	354	358			
	168580	CV 10x10	F	O	T	-40	298	315	306	306	001	1	
	168580	CV 10x10	F	K	T	-40	413	383	407	401			
	168580	CV 10x10	F	K	T	-40	303	280	310	298	001	1	
860447	171382	CV 10x10	F	O	T	-40	284	137	152	191			
	171382	CV 10x10	F	O	T	-40	234	229	303	255	001	1	
	171382	CV 10x10	F	K	T	-40	44	177	228	150			
	171382	CV 10x10	F	K	T	-40	92	181	145	140	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
Set values	<=												
860758	168375	CV 10x10	F	O	T	-40	331	358	350	346			
	168777	CV 10x10	F	O	T	-40	349	358	347	351			
	168781	CV 10x10	F	O	T	-40	350	357	355	354			
	170955	CV 10x10	F	O	T	-40	348	349	347	348			
	168375	CV 10x10	F	O	T	-40	280	306	191	259	001	1	
	168777	CV 10x10	F	O	T	-40	312	283	329	308	001	1	
	168781	CV 10x10	F	O	T	-40	277	320	329	309	001	1	
	168375	CV 10x10	F	K	T	-40	314	344	358	339			
	168777	CV 10x10	F	K	T	-40	363	364	356	361			
	168781	CV 10x10	F	K	T	-40	143	42	82	89			
	168375	CV 10x10	F	K	T	-40	318	280	335	311	001	1	
	168777	CV 10x10	F	K	T	-40	292	304	337	311	001	1	
	168781	CV 10x10	F	K	T	-40	61	116	116	98	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
861322	170954	CV 10x10	F	O	T	-40	340	328	327	332			
861323	168795	CV 10x10	F	O	T	-40	341	339	347	342			
	170924	CV 10x10	F	O	T	-40	292	318	309	307			
	168795	CV 10x10	F	O	T	-40	311	297	310	306	001	1	
	168795	CV 10x10	F	K	T	-40	327	320	337	328			
	168795	CV 10x10	F	K	T	-40	280	315	312	302	001	1	
861325	171932	CV 10x10	F	O	T	-40	338	339	347	341			
	171932	CV 10x10	F	O	T	-40	263	320	310	298	001	1	
	171932	CV 10x10	F	K	T	-40	324	352	336	337			
	171932	CV 10x10	F	K	T	-40	304	263	264	277	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
861662	171628	CV 10x10	F	O	T	-40	313	329	328	323			
	171629	CV 10x10	F	O	T	-40	319	310	325	318			
	171628	CV 10x10	F	O	T	-40	257	59	262	193	001	1	
	171628	CV 10x10	F	K	T	-40	339	359	356	351			
	171628	CV 10x10	F	K	T	-40	171	228	233	211	001	1	
861665	171889	CV 10x10	F	O	T	-40	324	344	355	341			
	171889	CV 10x10	F	O	T	-40	257	290	312	286	001	1	
	171889	CV 10x10	F	K	T	-40	375	362	357	365			
	171889	CV 10x10	F	K	T	-40	46	294	290	210	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
861927	170961	CV 10x10	F	O	T	-40	340	325	333	332			
	170986	CV 10x10	F	O	T	-40	346	353	352	350			
	170990	CV 10x10	F	O	T	-40	377	362	358	365			
	170992	CV 10x10	F	O	T	-40	361	361	367	363			
	173123	CV 10x10	F	O	T	-40	339	344	351	345			
861928	170996	CV 10x10	F	O	T	-40	358	363	361	360			
948013	170902	CV 10x10	F	O	T	-40	339	333	333	335			
948018	170978	CV 10x10	F	O	T	-40	352	357	360	357			
948056	168380	CV 10x10	F	O	T	-40	332	354	359	348			
	168380	CV 10x10	F	O	T	-40	291	273	323	296	001	1	
	168380	CV 10x10	F	K	T	-40	359	374	360	364			
	168380	CV 10x10	F	K	T	-40	323	293	272	296	001	1	
948257	170928	CV 10x10	F	O	T	-40	282	314	329	308			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
948259	170926	CV 10x10	F	O	T	-40	341	344	333	339			
	170956	CV 10x10	F	O	T	-40	315	344	341	333			
949159	169974	CV 10x10	F	O	T	-40	314	311	314	313			
	171931	CV 10x10	F	O	T	-40	324	331	313	323			
	169974	CV 10x10	F	O	T	-40	293	283	279	285	001	1	
	171931	CV 10x10	F	O	T	-40	291	291	283	288	001	1	
	169974	CV 10x10	F	K	T	-40	213	236	266	238			
	171931	CV 10x10	F	K	T	-40	291	276	265	277			
	169974	CV 10x10	F	K	T	-40	214	224	252	230	001	1	
	171931	CV 10x10	F	K	T	-40	210	224	227	220	001	1	
>=						-40	29	29	29	46			
Set values <=													
751806	174546	CV 10x10	F	ZB2	T	-40	288	304	259	284			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	29	29	29	46			
754265	170981	CV 10x10	F	ZB2	T	-40	265	236	244	248			strain aged 5%, 60 min. at 250°C
754272	170903	CV 10x10	F	ZB2	T	-40	321	333	325	326			strain aged 5%, 60 min. at 250°C
754582	168794	CV 10x10	F	ZB2	T	-40	332	54	327	238			strain aged 5%, 60 min. at 250°C
755680	176964	CV 10x10	F	ZB2	T	-40	317	325	320	320			strain aged 5%, 60 min. at 250°C
859727	168580	CV 10x10	F	ZB2	T	-40	329	329	331	330			strain aged 5%, 60 min. at 250°C
860447	163141	CV 10x10	F	ZB2	T	-40	66	62	48	59			strain aged 5%, 60 min. at 250°C
860758	168781	CV 10x10	F	ZB2	T	-40	59	63	67	63			strain aged 5%, 60 min. at 250°C
861322	170954	CV 10x10	F	ZB2	T	-40	288	288	241	272			strain aged 5%, 60 min. at 250°C
861323	168795	CV 10x10	F	ZB2	T	-40	305	310	270	295			strain aged 5%, 60 min. at 250°C
	170924	CV 10x10	F	ZB2	T	-40	319	322	323	321			strain aged 5%, 60 min. at 250°C
861325	168332	CV 10x10	F	ZB2	T	-40	282	301	297	293			strain aged 5%, 60 min. at 250°C
861662	171628	CV 10x10	F	ZB2	T	-40	264	298	296	286			strain aged 5%, 60 min. at 250°C
	171629	CV 10x10	F	ZB2	T	-40	278	297	280	285			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
861665	171889	CV 10x10	F	ZB2	T	-40	126	89	105	107			strain aged 5%, 60 min. at 250°C
861927	170961	CV 10x10	F	ZB2	T	-40	316	224	174	238			strain aged 5%, 60 min. at 250°C
861928	170996	CV 10x10	F	ZB2	T	-40	335	333	345	338			strain aged 5%, 60 min. at 250°C
948013	170902	CV 10x10	F	ZB2	T	-40	278	309	50	213			strain aged 5%, 60 min. at 250°C
948018	170978	CV 10x10	F	ZB2	T	-40	323	306	340	323			strain aged 5%, 60 min. at 250°C
948056	168380	CV 10x10	F	ZB2	T	-40	290	325	317	310			strain aged 5%, 60 min. at 250°C
948257	170928	CV 10x10	F	ZB2	T	-40	252	261	267	260			strain aged 5%, 60 min. at 250°C
948259	170926	CV 10x10	F	ZB2	T	-40	320	323	315	319			strain aged 5%, 60 min. at 250°C
949159	169974	CV 10x10	F	ZB2	T	-40	301	300	293	298			strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  K: ½ t
  O: surface
  ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
751806	174546	F	OS	HV10	200	201	202
754265	159038	F	OS	HV10	206	213	209
754272	170921	F	OS	HV10	190	188	192
754582	164400	F	OS	HV10	198	202	202
755680	176964	F	OS	HV10	211	211	214
859727	154898	F	OS	HV10	203	199	204
860447	171382	F	OS	HV10	251	255	255
860758	168781	F	OS	HV10	244	240	237
861322	170954	F	OS	HV10	208	206	211
861323	170924	F	OS	HV10	191	199	195
861325	171932	F	OS	HV10	218	211	212
861662	171629	F	OS	HV10	202	210	203
861665	171889	F	OS	HV10	224	226	226
861927	170992	F	OS	HV10	208	208	206
861928	170996	F	OS	HV10	219	218	213
948013	159551	F	OS	HV10	196	195	195
948018	159076	F	OS	HV10	216	215	217
948056	158938	F	OS	HV10	199	199	201
948257	170928	F	OS	HV10	225	226	220
948259	170926	F	OS	HV10	206	209	207
949159	169974	F	OS	HV10	265	264	257

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z (SV) %	Z (SV) %	Z (SV) %	Z (AV) %
>=						416	416	416	25	25	25	35
Set values <=												
751806	174546	Ø	6.00	F	S	605	608	609	82	82	82	82
754265	170981	Ø	6.02	F	S	715	713	727	81	81	79	80
754272	170921	Ø	9.97	F	S	573	576	575	81	78	83	81
755680	176964	Ø	9.94	F	S	564	565	564	82	83	83	83
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861322	170954	Ø	10.00	F	S	610	608	609	77	79	78	78
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861927	170961	Ø	9.96	F	S	599	598	597	82	81	78	80
	170992	Ø	6.02	F	S	615	615	619	83	85	84	84
861928	170996	Ø	6.02	F	S	608	608	606	86	83	85	85
948013	170902	Ø	9.97	F	S	600	602	599	82	81	82	82
948018	170978	Ø	6.02	F	S	622	469	624	83	76	83	81
948257	170928	Ø	6.09	F	S	633	631	629	83	83	82	82
948259	170926	Ø	9.95	F	S	589	589	589	82	84	83	83
	170956	Ø	5.99	F	S	636	636	636	82	82	83	82
>=						400	400	400	25	25	25	35
Set values <=												
754582	164880	Ø	9.98	F	S	562	561	562	83	83	85	84
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
860447	171382	Ø	9.96	F	S	592	588	592	70	71	75	72
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861325	168329	Ø	9.98	F	S	590	587	591	81	81	78	80
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861665	171889	Ø	9.97	F	S	577	578	577	80	81	81	80
948056	158938	Ø	9.97	F	S	583	579	582	83	83	84	83
949159	169974	Ø	9.92	F	S	593	592	593	80	79	74	78

SpThickn: specimen thickness

Z02 Inspection representative voestalpine Höpfl Nadine

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Surveyor

voestalpine
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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %

C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
751806	151215	.036	.334	1.630	.006	.0005	.032	.171	.170	.007	.166	.003	.036	.010	.0065	.0002	.0020	.0022	.0020	.0020
754265	170981	.040	.326	1.600	.008	.0007	.030	.169	.170	.004	.162	.005	.037	.011	.0057	.0005	.0020	.0013	.0020	.0020
754272	170921	.029	.335	1.620	.007	.0006	.032	.183	.170	.005	.162	.004	.034	.012	.0045	.0002	.0020	.0015	.0020	.0020
754582	168790	.030	.290	1.580	.006	.0006	.035	.178	.230	.025	.138	.004	.033	.011	.0050	.0002	.0020	.0013	.0020	.0020
	168793	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.189	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020
	168794	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.190	.004	.035	.011	.0050	.0002	.0020	.0014	.0020	.0020
755680	176964	.030	.323	1.610	.006	.0005	.031	.176	.170	.007	.158	.004	.035	.010	.0047	.0003	.0020	.0013	.0020	.0020
859727	154868	.030	.345	1.620	.006	.0003	.034	.171	.180	.006	.171	.003	.035	.011	.0050	.0002	.0020	.0019	.0020	.0020
860447	162234	.057	.388	1.530	.008	.0003	.037	.171	.280	.018	.162	.003	.025	.012	.0043	.0002	.0020	.0028	.0020	.0020
	171383	.060	.390	1.540	.008	.0007	.036	.175	.280	.018	.164	.004	.026	.011	.0042	.0003	.0020	.0026	.0020	.0020
860758	168375	.033	.323	1.610	.005	.0004	.038	.165	.190	.006	.160	.004	.035	.012	.0058	.0002	.0020	.0013	.0020	.0020
	168777	.030	.331	1.600	.005	.0005	.038	.172	.180	.006	.180	.004	.035	.012	.0046	.0003	.0020	.0013	.0020	.0020
	168781	.033	.323	1.610	.005	.0004	.038	.164	.190	.006	.159	.004	.035	.012	.0047	.0002	.0020	.0014	.0020	.0020
	170951	.033	.321	1.580	.005	.0005	.038	.166	.190	.006	.160	.003	.034	.012	.0046	.0002	.0020	.0015	.0020	.0020
861322	170954	.038	.321	1.590	.005	.0007	.028	.178	.180	.007	.167	.004	.033	.011	.0052	.0003	.0020	.0014	.0020	.0020
861323	170924	.031	.336	1.620	.005	.0005	.035	.184	.180	.009	.161	.004	.038	.012	.0048	.0002	.0020	.0016	.0020	.0020
861325	171923	.050	.186	1.520	.006	.0005	.036	.184	.510	.118	.015	.004	.026	.012	.0048	.0002	.0020	.0011	.0020	.0020
861662	171629	.035	.350	1.610	.007	.0009	.033	.180	.170	.008	.159	.003	.036	.010	.0052	.0002	.0020	.0016	.0020	.0020
861665	171889	.032	.335	1.590	.006	.0007	.043	.182	.200	.006	.167	.003	.035	.012	.0045	.0003	.0020	.0018	.0020	.0020
861927	170986	.032	.323	1.630	.009	.0004	.034	.179	.170	.007	.164	.003	.036	.012	.0051	.0003	.0020	.0017	.0020	.0020
	170990	.032	.313	1.590	.008	.0006	.031	.178	.170	.006	.162	.003	.035	.012	.0050	.0003	.0020	.0017	.0020	.0020
	170992	.032	.318	1.610	.008	.0005	.031	.179	.170	.006	.165	.003	.037	.013	.0050	.0003	.0020	.0015	.0020	.0020
	173123	.033	.316	1.590	.008	.0005	.030	.181	.170	.006	.161	.003	.034	.012	.0063	.0003	.0020	.0018	.0020	.0020
861928	170996	.031	.325	1.620	.006	.0005	.031	.181	.170	.007	.160	.004	.036	.011	.0045	.0003	.0020	.0013	.0020	.0020
948013	170902	.035	.335	1.620	.006	.0007	.032	.187	.170	.005	.158	.003	.038	.013	.0051	.0003	.0020	.0013	.0020	.0020
948018	170978	.034	.330	1.600	.007	.0005	.038	.168	.170	.008	.166	.003	.039	.012	.0049	.0003	.0020	.0011	.0020	.0020
948056	168380	.035	.332	1.590	.007	.0005	.036	.170	.170	.007	.157	.003	.035	.012	.0048	.0002	.0020	.0025	.0020	.0020
948257	170928	.033	.308	1.600	.006	.0006	.034	.169	.170	.007	.162	.003	.036	.012	.0053	.0002	.0060	.0021	.0020	.0020
948259	170926	.038	.325	1.610	.005	.0006	.037	.170	.170	.006	.163	.003	.034	.012	.0050	.0003	.0020	.0015	.0020	.0020
949159	169974	.055	.183	1.530	.007	.0012	.029	.188	.520	.120	.021	.004	.026	.012	.0051	.0002	.0020	.0009	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.41	.22	.120	.130	
751806	151215	.0020	.0020	.37	.15	.039	.049	4.92
754265	170981	.0020	.0020	.36	.15	.042	.053	5.26
754272	170921	.0020	.0020	.36	.14	.038	.050	7.11
754582	168790	.0020	.0020	.36	.14	.037	.048	7.00
	168793	.0020	.0020	.35	.14	.039	.050	8.57
	168794	.0020	.0020	.35	.14	.039	.050	8.40
755680	176964	.0020	.0020	.36	.14	.039	.049	6.60
859727	154868	.0020	.0020	.36	.14	.038	.049	6.80
860447	162234	.0020	.0020	.38	.17	.028	.040	8.60
	171383	.0020	.0020	.39	.17	.030	.041	8.57
860758	168375	.0020	.0020	.36	.15	.039	.051	6.55
	168777	.0020	.0020	.36	.14	.039	.051	8.26
	168781	.0020	.0020	.36	.15	.039	.051	8.09
	170951	.0020	.0020	.35	.14	.037	.049	8.26
861322	170954	.0020	.0020	.36	.15	.037	.048	5.38
861323	170924	.0020	.0020	.36	.15	.042	.054	7.29
861325	171923	.0020	.0020	.40	.16	.030	.042	7.50
861662	171629	.0020	.0020	.36	.15	.039	.049	6.35
861665	171889	.0020	.0020	.36	.15	.038	.050	9.56
861927	170986	.0020	.0020	.36	.15	.039	.051	6.67
	170990	.0020	.0020	.36	.14	.038	.050	6.20
	170992	.0020	.0020	.36	.15	.040	.053	6.20
	173123	.0020	.0020	.36	.15	.037	.049	4.76
861928	170996	.0020	.0020	.36	.15	.040	.051	6.89
948013	170902	.0020	.0020	.37	.15	.041	.054	6.27
948018	170978	.0020	.0020	.36	.15	.042	.054	7.76
948056	168380	.0020	.0020	.36	.15	.038	.050	7.50
948257	170928	.0020	.0020	.36	.14	.039	.051	6.42
948259	170926	.0020	.0020	.36	.15	.037	.049	7.40
949159	169974	.0020	.0020	.41	.17	.030	.042	5.69

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 120:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 130:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 140:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 150:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

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Remarks

Item 160:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 170:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 180:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 190:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 200:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80, 90
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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Surveyor

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301574

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 1/26
Datum/Date: 15.10.2019

Nr. (A07) Bestoller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge mm x mm x mm Thickness x Width x Length (B09-B11)
01	1	146204 2	53565	TM	15,00 x 2500,0 x 12000
01	1	146205 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147484 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147484 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147485 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147485 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147486 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147486 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147487 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147487 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147488 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147488 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147489 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147489 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147490 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147490 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147491 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147491 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147492 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147492 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147493 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147494 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147494 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147495 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147495 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147801 1	25832	TM	15,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 2/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger / Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B06)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
01	1	147801 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147802 1	68832	TM	15,00 x 2500,0 x 12000
01	1	147803 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147804 1	25832	TM	15,00 x 2500,0 x 12000
01	1	147804 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147805 1	14711	TM	15,00 x 2500,0 x 12000
02	1	147776 1	53565	TM	15,00 x 2500,0 x 16000
02	1	147777 1	53565	TM	15,00 x 2500,0 x 16000
02	1	147800 1	24964	TM	15,00 x 2500,0 x 16000
03	1	147529 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147530 1	53528	TM	20,00 x 2500,0 x 12000
03	1	147530 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147531 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147532 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147532 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147533 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147533 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147534 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147534 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147535 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147535 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147536 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147536 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147537 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147537 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147538 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147538 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147539 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147540 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147540 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147541 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147541 2	26008	TM	20,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 18 64 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 3/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02–B03): S460MLO Z35 / DIN EN 10225-1 11/19 / DIN EN 10029 B 02/11 / DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08): 0000100512

Lieferschein-Nr. Dispatch note No.: 0088503535 / 14.10.2019

Abnahme Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
03	1	147542 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147542 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147543 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147543 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147544 1	26008	TM	20,00 x 2500,0 x 12000
03	1	150080 1	25832	TM	20,00 x 2500,0 x 12000
04	1	147464 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147465 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147466 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147467 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147468 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147469 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147470 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147471 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147473 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147474 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147475 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147476 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147477 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147478 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147479 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147522 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147523 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147524 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147525 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147527 1	24964	TM	20,00 x 2500,0 x 16000
05	1	147463 1	26009	TM	25,00 x 2500,0 x 12000
05	1	147507 1	53565	TM	25,00 x 2500,0 x 12000
05	1	147508 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147509 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147510 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147511 1	53528	TM	25,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Horstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 4/26
Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
05	1	147512 1	26009	TM	25,00 x 2500,0 x 12000
05	1	147512 2	26009	TM	25,00 x 2500,0 x 12000
05	1	147513 1	25832	TM	25,00 x 2500,0 x 12000
05	1	147514 1	25832	TM	25,00 x 2500,0 x 12000
06	1	147152 1	26037	TM	25,00 x 2500,0 x 16000
06	1	147154 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147156 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147157 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147158 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147159 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147160 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147161 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147162 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147163 1	26007	TM	25,00 x 2500,0 x 16000
07	1	147101 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147102 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147103 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147104 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147105 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147106 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147107 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147108 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147109 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147113 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147114 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147115 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147116 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147117 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147118 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147119 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147120 1	24964	TM	30,00 x 2500,0 x 12000
08	1	147086 1	53528	TM	30,00 x 2500,0 x 16000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 5/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger / Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A09): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length mm x mm x mm (B09-B11)
08	1	147087 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147088 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147089 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147091 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147092 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147094 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147096 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147097 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147099 1	53528	TM	30,00 x 2500,0 x 16000
09	1	147061 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147062 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147064 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147066 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147069 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147070 1	26005	TM	40,00 x 2500,0 x 12000
09	1	147071 1	26005	TM	40,00 x 2500,0 x 12000
09	1	149385 1	26005	TM	40,00 x 2500,0 x 12000
10	1	147057 1	26006	TM	40,00 x 2500,0 x 16000
10	1	147201 1	53744	TM	40,00 x 2500,0 x 16000
10	1	147202 1	53744	TM	40,00 x 2500,0 x 16000

01	32	Gewicht	113.056	kg
02	3	Weight	14.130	kgs
03	29	(B12)	136.590	
04	20		125.600	
05	10		58.880	
06	10		78.500	
07	17		120.105	
08	10		94.200	
09	8		75.360	
10	3		37.680	
Σ	142		854.101	

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 6/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A09): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,13	0,15 - 0,55	≤ 1,65	≤ 0,020	≤ 0,005	≤ 0,010	0,015-0,055	≤ 0,30	≤ 0,25	≤ 0,70
14711	0,09	0,33	1,65	0,013	0,001	0,003	0,037	0,01	0,05	0,04
24695	0,08	0,29	1,57	0,012	0,002	0,003	0,036	0,02	0,03	0,04
24964	0,08	0,28	1,60	0,014	0,003	0,004	0,043	0,02	0,04	0,06
25832	0,10	0,30	1,6	0,014	0,003	0,007	0,036	0,04	0,04	0,04
26005	0,08	0,17	1,62	0,013	0,001	0,006	0,033	0,24	0,03	0,36

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,080	≤ 0,025	≤ 0,040	≤ 0,0005	≤ 0,25	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,21
14711	0,009	0,011	0,040	0,0001	0,01	0,002	0,002	0,001	0,002	0,19
24695	0,003	0,012	0,038	0,0002	0,001	0,003	0,002	0	0,002	0,17
24964	0,005	0,013	0,037	0,0002	0,01	0,003	0,002	0	0,001	0,18
25832	0,003	0,015	0,040	0,0002	0,01	0,003	0,005	0,001	0,002	0,20
26005	0,037	0,002	0,037	0,0005	0,003	0,003	0,003	0	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤ 0,010		≤ 0,010	≤ 0,11	≤ 0,90	≤ 0,09
14711	0,001	0,38	0,000	0,06	0,11	0,05
24695	0,001	0,35	0	0,05	0,09	0,04
24964	0,001	0,36	0	0,06	0,13	0,04
25832	0,001	0,38	0	0,06	0,13	0,04
26005	0,002	0,40	0	0,08	0,63	0,07

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 18 64 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 7/26
Datum/Date: 15.10.2019

Nr. (A07) Bestellor Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35; DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,13	0,15 - 0,55	≤ 1,65	≤ 0,020	≤ 0,005	≤ 0,010	0,015-0,055	≤ 0,30	≤ 0,25	≤ 0,70
26006	0,07	0,19	1,61	0,01	0,003	0,005	0,044	0,22	0,04	0,38
26007	0,1	0,29	1,61	0,014	0,002	0,004	0,041	0,09	0,04	0,04
26008	0,09	0,30	1,62	0,011	0,004	0,004	0,027	0,03	0,03	0,03
26009	0,09	0,29	1,60	0,011	0,002	0,005	0,046	0,02	0,08	0,05
26037	0,09	0,29	1,61	0,011	0,005	0,005	0,045	0,09	0,04	0,04
53528	0,09	0,30	1,63	0,015	0,001	0,006	0,048	0,07	0,04	0,04
53565	0,09	0,3	1,63	0,009	0,003	0,006	0,041	0,11	0,04	0,05

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,080	≤ 0,025	≤ 0,040	≤ 0,0005	≤ 0,25	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,21
26006	0,038	0,003	0,037	0,0001	0,003	0,003	0,002	0	0,001	0,18
26007	0,004	0,017	0,040	0,0003	0	0,003	0,009	0	0,001	0,20
26008	0,002	0,011	0,040	0,0001	0	0,003	0,003	0	0,001	0,19
26009	0,003	0,016	0,040	0,0002	0,02	0,003	0,002	0	0,001	0,19
26037	0,003	0,011	0,040	0,0001	0,003	0,003	0,003	0	0,002	0,19
53528	0,004	0,015	0,040	0,0003	0,004	0,003	0,006	0,001	0,002	0,19
53565	0,004	0,012	0,040	0,0002	0,002	0,003	0,003	0	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤ 0,010		≤ 0,010	≤ 0,11	≤ 0,90	≤ 0,09
26006	0,001	0,39	0	0,08	0,64	0,08
26007	0,001	0,39	0	0,06	0,17	0,04
26008	0,001	0,37	0	0,05	0,09	0,04
26009	0,001	0,38	0	0,06	0,17	0,04
26037	0,001	0,38	0	0,05	0,17	0,04
53528	0,001	0,38	0	0,06	0,15	0,04
53565	0,001	0,38	0	0,06	0,20	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 8/26
Datum/Date 15.10.2019

Nr. (A07)
Besteller
Purchaser
(A06)

16.07.2019 Nr. (A07)
Empfänger
Customer
(A06)

Erzeugnis / Product: Grobblech / Heavy plate
(B01)

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30	Cr % ≤ 0,25	Ni % ≤ 0,70
53744	0,08	0,18	1,62	0,014	0,002	0,004	0,034	0,21	0,04	0,35
68832	0,09	0,31	1,58	0,014	0,003	0,003	0,036	0,02	0,04	0,03

Schmelzen-Nr. Heat No. (B07)	V % ≤ 0,080	Ti % ≤ 0,075	Nb % ≤ 0,040	B % ≤ 0,0005	Mo % ≤ 0,25	As % ≤ 0,030	Sn % ≤ 0,020	Pb % ≤ 0,010	Ca % ≤ 0,005	EV1 1) % ≤ 0,21
53744	0,034	0,003	0,032	0,0001	0,01	0,003	0,002	0	0,001	0,19
68832	0,004	0,013	0,040	0,0003	0,01	0,002	0,006	0,000	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤ 0,010	EV2 2) %	Bi % ≤ 0,010	EV3 3) % ≤ 0,11	EV4 4) % ≤ 0,90	Nb+V % ≤ 0,09
53744	0,001	0,40	0	0,07	0,61	0,07
68832	0,000	0,37	0,000	0,06	0,10	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 9/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
124265 *)	14711	0,08	0,31	1,62	0,013	0,002	0,002	0,044	0,01
124265 *)	14711	0,09	0,31	1,64	0,014	0,001	0,002	0,034	0,01
142668 *)	24695	0,08	0,27	1,61	0,009	0,004	0,002	0,039	0,03
142668 *)	24695	0,08	0,32	1,51	0,013	0,002	0,002	0,036	0,02
143193 *)	24695	0,08	0,28	1,57	0,014	0,004	0,003	0,032	0,02
143193 *)	24695	0,08	0,32	1,56	0,012	0,004	0,003	0,035	0,02

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
124265 *)	14711	0,05	0,03	0,007	0,008	0,032	0,01	0,0004	0,18
124265 *)	14711	0,05	0,04	0,011	0,015	0,038	0,003	0,0005	0,19
142668 *)	24695	0,03	0,04	0,003	0,013	0,031	0,002	0,0001	0,17
142668 *)	24695	0,04	0,04	0,002	0,009	0,034	0,00	0,0001	0,17
143193 *)	24695	0,04	0,04	0,002	0,015	0,039	0,002	0,0000	0,17
143193 *)	24695	0,04	0,03	0,003	0,014	0,035	0,002	0,0004	0,17

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
124265 *)	14711	0,37	0,10	0,05	0,04
124265 *)	14711	0,38	0,10	0,06	0,05
142668 *)	24695	0,36	0,10	0,05	0,03
142668 *)	24695	0,34	0,10	0,05	0,04
143193 *)	24695	0,35	0,10	0,06	0,04
143193 *)	24695	0,35	0,09	0,05	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 18 64 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 10/26
Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 - 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
147116	24964	0,08	0,26	1,56	0,018	0,003	0,005	0,038	0,03
147116	24964	0,07	0,28	1,56	0,016	0,003	0,004	0,047	0,02
145821 *)	25832	0,09	0,29	1,6	0,016	0,005	0,007	0,041	0,04
145821 *)	25832	0,09	0,33	1,5	0,018	0,004	0,007	0,036	0,03
147045 *)	26005	0,07	0,18	1,58	0,016	0,003	0,004	0,030	0,23
147045 *)	26005	0,09	0,19	1,62	0,015	0,000	0,004	0,037	0,25

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	Mo % ≤0,23	B %	EV1 1) % ≤0,21
147116	24964	0,05	0,06	0,003	0,013	0,030	0,004	0,0006	0,18
147116	24964	0,05	0,06	0,003	0,014	0,037	0,01	0,0007	0,17
145821 *)	25832	0,05	0,03	0,004	0,011	0,038	0,01	0,0004	0,19
145821 *)	25832	0,04	0,05	0,004	0,011	0,040	0,01	0,0005	0,18
147045 *)	26005	0,04	0,35	0,042	0,003	0,030	0,003	0,0004	0,18
147045 *)	26005	0,04	0,38	0,038	0,002	0,039	0,001	0,0005	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤0,90	EV4 4) % ≤0,11	Nb+V % ≤0,09
147116	24964	0,36	0,14	0,05	0,03
147116	24964	0,35	0,14	0,05	0,04
145821 *)	25832	0,37	0,13	0,05	0,04
145821 *)	25832	0,36	0,13	0,06	0,04
147045 *)	26005	0,39	0,62	0,08	0,07
147045 *)	26005	0,42	0,67	0,08	0,08

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 11/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger / Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03): S460MLO Z35 DIN EN 10225-1 11/19 DIN EN 10029 B 02/11 DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
149385	26005	0,09	0,17	1,61	0,009	0,001	0,006	0,025	0,23
149385	26005	0,08	0,18	1,60	0,014	0,001	0,005	0,039	0,23
147064	26006	0,06	0,18	1,59	0,01	0,004	0,004	0,045	0,21
147064	26006	0,07	0,18	1,62	0,02	0,002	0,004	0,042	0,21
147163	26007	0,0	0,28	1,59	0,015	0,003	0,005	0,040	0,09
147163	26007	0,1	0,30	1,61	0,014	0,003	0,002	0,045	0,09

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
149385	26005	0,03	0,36	0,042	0,001	0,036	0,003	0,0005	0,20
149385	26005	0,03	0,36	0,037	0,002	0,032	0,00	0,0002	0,19
147064	26006	0,04	0,39	0,041	0,003	0,035	0,004	0,0001	0,17
147064	26006	0,04	0,40	0,031	0,003	0,029	0,003	0,0003	0,18
147163	26007	0,04	0,04	0,005	0,019	0,032	0	0,0004	0,10
147163	26007	0,04	0,04	0,001	0,020	0,031	0	0,0003	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
149385	26005	0,41	0,62	0,08	0,08
149385	26005	0,40	0,62	0,07	0,07
147064	26006	0,38	0,64	0,08	0,08
147064	26006	0,40	0,65	0,06	0,06
147163	26007	0,28	0,17	0,06	0,04
147163	26007	0,39	0,17	0,05	0,03

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 12/26
Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A05)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535, 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 - 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
147532	26008	0,10	0,31	1,64	0,009	0,001	0,002	0,023	0,03
147532	26008	0,08	0,29	1,60	0,010	0,004	0,005	0,033	0,03
147533	26008	0,10	0,33	1,63	0,013	0,004	0,005	0,021	0,03
147533	26008	0,09	0,32	1,65	0,010	0,002	0,005	0,029	0,02
147160	26009	0,08	0,28	1,62	0,015	0,002	0,004	0,051	0,01
147160	26009	0,08	0,27	1,60	0,012	0,003	0,007	0,049	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	Mo % ≤0,23	B %	EV1 1) % ≤0,21
147532	26008	0,02	0,04	0,004	0,008	0,036	0	0,0000	0,20
147532	26008	0,04	0,04	0,000	0,007	0,037	0	0,0005	0,18
147533	26008	0,02	0,04	0,001	0,012	0,038	0	0,0002	0,20
147533	26008	0,02	0,03	0,003	0,010	0,036	0	0,0000	0,19
147160	26009	0,09	0,05	0,004	0,014	0,035	0,02	0,0001	0,18
147160	26009	0,07	0,05	0,004	0,016	0,036	0,03	0,0002	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤0,90	EV4 4) % ≤0,11	Nb+V % ≤0,09
147532	26008	0,38	0,09	0,05	0,04
147532	26008	0,36	0,11	0,04	0,04
147533	26008	0,38	0,09	0,05	0,04
147533	26008	0,37	0,07	0,05	0,04
147160	26009	0,38	0,17	0,05	0,04
147160	26009	0,37	0,17	0,06	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/6+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

ENVIRONMENT - SAFEGUARDING LIFE, PROPERTY AND THE 18 84 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller — Empfänger
Purchaser — Customer
(A06) (A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/19
(B02–B03) DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. 0000100512
Works order No.
(A08)
Lieferschein-Nr. 0088503535
Dispatch note No. 14.10.2019

Abnahme DNVGL
Inspection **N141U2Y6**
(A05)

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
147512	26009	0,07	0,29	1,62	0,012	0,003	0,005	0,054	0,02
147512	26009	0,09	0,30	1,60	0,014	0,002	0,007	0,039	0,02
147105	26037	0,10	0,31	1,61	0,010	0,005	0,006	0,039	0,09
147105	26037	0,09	0,31	1,63	0,008	0,005	0,007	0,037	0,09
147107	26037	0,09	0,31	1,60	0,009	0,005	0,005	0,049	0,11
147107	26037	0,09	0,29	1,61	0,013	0,002	0,005	0,049	0,11

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
147512	26009	0,09	0,06	0,001	0,013	0,039	0,02	0,0005	0,17
147512	26009	0,09	0,04	0,003	0,013	0,036	0,02	0,0006	0,19
147105	26037	0,03	0,05	0,002	0,007	0,039	0,004	0,0000	0,20
147105	26037	0,04	0,04	0,004	0,010	0,039	0,002	0,0000	0,19
147107	26037	0,03	0,04	0,002	0,013	0,031	0,003	0,0004	0,19
147107	26037	0,04	0,04	0,003	0,013	0,039	0,003	0,0001	0,19

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
147512	26009	0,37	0,19	0,05	0,04
147512	26009	0,38	0,17	0,05	0,04
147105	26037	0,38	0,17	0,05	0,04
147105	26037	0,38	0,17	0,05	0,04
147107	26037	0,37	0,18	0,05	0,03
147107	26037	0,38	0,19	0,06	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

888/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 14/26
Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35 DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A06): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 – 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
147098 *)	53528	0,08	0,31	1,60	0,019	0,002	0,004	0,055	0,08
147098 *)	53528	0,08	0,28	1,56	0,013	0,000	0,007	0,040	0,06
147099	53528	0,10	0,28	1,62	0,018	0,001	0,006	0,040	0,06
147099	53528	0,09	0,32	1,63	0,013	0,003	0,005	0,050	0,05
146204	53565	0,10	0,2	1,58	0,005	0,004	0,008	0,047	0,11
146204	53565	0,10	0,2	1,58	0,010	0,002	0,004	0,035	0,11

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	Mo % ≤0,23	B %	EV1 1) % ≤0,21
147098 *)	53528	0,04	0,03	0,005	0,014	0,038	0,004	0,0006	0,18
147098 *)	53528	0,04	0,04	0,001	0,013	0,037	0,003	0,0008	0,18
147099	53528	0,04	0,03	0,003	0,018	0,039	0,004	0,0004	0,20
147099	53528	0,05	0,03	0,002	0,014	0,037	0,003	0,0003	0,19
146204	53565	0,04	0,04	0,005	0,012	0,038	0,003	0,0002	0,20
146204	53565	0,03	0,04	0,003	0,012	0,037	0,00	0,0006	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤0,90	EV4 4) % ≤0,11	Nb+V % ≤0,09
147098 *)	53528	0,36	0,15	0,06	0,04
147098 *)	53528	0,36	0,14	0,05	0,04
147099	53528	0,39	0,13	0,06	0,04
147099	53528	0,38	0,13	0,05	0,04
146204	53565	0,38	0,19	0,06	0,04
146204	53565	0,38	0,18	0,05	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/6+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 15/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A05)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535
14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
147464	53565	0,10	0,2	1,63	0,009	0,002	0,007	0,047	0,11
147464	53565	0,08	0,4	1,63	0,007	0,004	0,004	0,036	0,11
147201	53744	0,07	0,17	1,64	0,012	0,002	0,004	0,036	0,21
147201	53744	0,06	0,19	1,61	0,012	0,003	0,005	0,036	0,20
148000 *)	53744	0,09	0,18	1,63	0,010	0,002	0,004	0,039	0,21
148000 *)	53744	0,07	0,18	1,62	0,018	0,000	0,004	0,041	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
147464	53565	0,04	0,05	0,002	0,013	0,034	0,001	0,0005	0,20
147464	53565	0,04	0,05	0,002	0,008	0,038	0,00	0,0001	0,18
147201	53744	0,05	0,36	0,039	0,003	0,032	0,01	0,0005	0,18
147201	53744	0,04	0,33	0,028	0,003	0,032	0,01	0,0000	0,17
148000 *)	53744	0,04	0,35	0,037	0,003	0,029	0,004	0,0002	0,20
148000 *)	53744	0,05	0,35	0,038	0,004	0,033	0,01	0,0005	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
147464	53565	0,39	0,20	0,05	0,04
147464	53565	0,37	0,20	0,05	0,04
147201	53744	0,40	0,63	0,07	0,07
147201	53744	0,38	0,58	0,06	0,06
148000 *)	53744	0,42	0,60	0,07	0,07
148000 *)	53744	0,40	0,61	0,08	0,07

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Vockenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 16/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06) 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01) Grobblech Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03) S460MLO Z35 DIN EN 10225-1 11/19 DIN EN 10029 B 02/11 DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr Works order No. (A08) 0000100512
Lieferschein-Nr. Dispatch note No. 0088503535 14.10.2019

Abnahme Inspection (A05) DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
893397 *)	68832	0,10	0,31	1,63	0,014	0,004	0,003	0,030	0,02
893397 *)	68832	0,10	0,31	1,54	0,013	0,005	0,003	0,031	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
893397 *)	68832	0,04	0,04	0,005	0,014	0,034	0,01	0,0004	0,20
893397 *)	68832	0,04	0,03	0,003	0,013	0,036	0,01	0,0000	0,19

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
893397 *)	68832	0,39	0,11	0,05	0,04
893397 *)	68832	0,37	0,10	0,05	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

18 84 DNV·GL SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 17/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A08)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH N/mm2 460 - 580	Zugfestigkeit Tensile strength (C12) Rm N/mm2 550 - 700	ReH/Rm ReH/Rm	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
146204	53565	K4G	Q	TM	P	514	585	0,88	23	
147061	26006	K4G	Q	TM	P	499	555	0,90	26	
147064	26006	K4G	Q	TM	P	504	559	0,90	27	
147066	26006	K4G	Q	TM	P	490	552	0,89	31	
147088	53528	K4G	Q	TM	P	488	598	0,82	23	
147094	53528	K4G	Q	TM	P	495	600	0,82	28	
147097	53528	K4G	Q	TM	P	486	596	0,82	23	
147098 *)	53528	K4G	Q	TM	P	501	610	0,82	22	
147099	53528	K4G	Q	TM	P	503	598	0,84	26	
147100 *)	53528	K4G	Q	TM	P	478	589	0,81	27	
147105	26037	K4G	Q	TM	P	494	604	0,82	26	
147107	26037	K4G	Q	TM	P	490	599	0,82	24	
147114	24964	K4G	Q	TM	P	519	622	0,83	24	
147116	24964	K4G	Q	TM	P	522	626	0,83	26	
147119	24964	K4G	Q	TM	P	509	613	0,83	23	
147160	26009	K4G	Q	TM	P	501	599	0,84	24	
147163	26007	K4G	Q	TM	P	493	587	0,84	24	
147201	53744	K4G	Q	TM	P	483	550	0,88	30	
147463	26009	K4G	Q	TM	P	530	640	0,83	22	
147464	53565	K4G	Q	TM	P	498	605	0,82	24	
147469	53565	K4G	Q	TM	P	521	610	0,85	29	
147470	24964	K4G	Q	TM	P	522	594	0,88	23	
147479	24964	K4G	Q	TM	P	544	614	0,89	24	
147485	53565	K4G	Q	TM	P	578	622	0,93	23	
147490	53565	K4G	Q	TM	P	573	622	0,92	22	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

*) *Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery*

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 18/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH N/mm2 460 - 580	Zugfestigkeit Tensile strength (C12) Rm N/mm2 550 - 700	ReH/Rm ReH/Rm	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
147495	53565	K4G	Q	TM	P	555	613	0,91	27	
147511	53528	K4G	Q	TM	P	509	608	0,84	27	
147512	26009	K4G	Q	TM	P	529	631	0,84	25	
147514	25832	K4G	Q	TM	P	511	593	0,86	24	
147525	24695	K4G	Q	TM	P	532	596	0,89	29	
147527	24964	K4G	Q	TM	P	529	606	0,87	27	
147531	53528	K4G	Q	TM	P	523	613	0,85	23	
147532	26008	K4G	Q	TM	P	530	592	0,90	24	
147533	26008	K4G	Q	TM	P	535	615	0,87	22	
147534	26008	K4G	Q	TM	P	517	601	0,86	23	
147800	24964	K4G	Q	TM	P	561	602	0,93	25	
147802	68832	K4G	Q	TM	P	574	614	0,93	23	
147804	25832	K4G	Q	TM	P	529	599	0,88	23	
147805	14711	K4G	Q	TM	P	579	634	0,91	22	
149385	26005	K4G	Q	TM	P	550	608	0,90	28	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
6) P: prismatisch / prismatic
7) A5: $Lo=5,65\sqrt{So}$
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 19/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35
145812 *)	25832	K4	TM	59	70	57	62
145821 *)	25832	K4	TM	67	62	69	66
146203 *)	24964	K4	TM	47	57	37	47
146204	53565	K4	TM	49	42	53	48
147064	26006	K4	TM	72	70	72	71
147098 *)	53528	K4	TM	66	69	65	67
147099	53528	K4	TM	74	69	69	71
147105	26037	K4	TM	38	30	46	38
147114	24964	K4	TM	67	69	68	68

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 N/mm2 ≥440	2	3
145812 *)	25832	K4	TM	585	597	594
145821 *)	25832	K4	TM	597	592	599
146203 *)	24964	K4	TM	580	576	566
146204	53565	K4	TM	580	583	578
147064	26006	K4	TM	551	557	554
147098 *)	53528	K4	TM	599	597	601
147099	53528	K4	TM	584	590	579
147105	26037	K4	TM	599	605	601
147114	24964	K4	TM	614	617	613

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)

QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
O-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 20/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06) 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis / Product: Grobblech / Heavy plate (B01)

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35; DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A09): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535, 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥ 25	2	3	MW 4) % ≥ 35
147116	24964	K4	TM	58	55	51	55
147160	26009	K4	TM	59	65	66	63
147163	26007	K4	TM	58	62	61	60
147201	53744	K4	TM	65	62	59	62
147464	53565	K4	TM	61	59	59	60
147479	24964	K4	TM	56	54	60	57
147511	53528	K4	TM	66	66	49	60
147525	24695	K4	TM	62	64	57	61
147531	53528	K4	TM	70	70	65	68

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 N/mm2 ≥ 440	2	3
147116	24964	K4	TM	627	627	626
147160	26009	K4	TM	573	577	570
147163	26007	K4	TM	572	568	569
147201	53744	K4	TM	544	547	541
147464	53565	K4	TM	596	589	590
147479	24964	K4	TM	594	586	595
147511	53528	K4	TM	583	577	580
147525	24695	K4	TM	589	587	593
147531	53528	K4	TM	601	596	603

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 21/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥ 25	2	3	MW 4) % ≥ 35	
147532	26008	K4	TM	70	67	71	69	
147802	68832	K4	TM	68	70	64	67	
147804	25832	K4	TM	73	67	69	70	
147805	14711	K4	TM	71	72	62	68	
149385	26005	K4	TM	69	71	73	71	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 N/mm2 ≥ 440	2	3		
147532	26008	K4	TM	576	577	575		
147802	68832	K4	TM	603	606	603		
147804	25832	K4	TM	577	579	578		
147805	14711	K4	TM	634	615	615		
149385	26005	K4	TM	583	578	585		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 22/26
Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller Empfänger
Purchaser Customer
(A06) (A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/19
(B02-B03) DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. 0000100512
Works order No.
(A08)
Lieferschein-Nr. 0088503535
Dispatch note No. 14.10.2019

Abnahme DNVGL
Inspection **N141U2Y6**
(A05)

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C08)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
146203 *)	24964	K4O	Q	A5	KV	-040	181	180	200	187
146203 *)	24964	K4O	Q	A6	KV	-040	118	134	142	131
146204	53565	K4O	Q	A5	KV	-040	92	73	100	88
146204	53565	K4O	Q	A6	KV	-040	74	65	61	67
146204	53565	K4O	Q	TM	KV600	-040	155	153	146	151
147061	26006	K4O	Q	TM	KV450	-040	333	293	289	305
147064	26006	K4O	Q	A5	KV450	-040	274	305	254	278
147064	26006	K4O	Q	A6	KV450	-040	224	208	208	213
147064	26006	K4O	Q	TM	KV600	-040	219	256	217	231
147066	26006	K4O	Q	TM	KV600	-040	314	298	343	318
147088	53528	K4O	Q	TM	KV450	-040	200	209	219	209
147094	53528	K4O	Q	TM	KV450	-040	147	146	138	144
147097	53528	K4O	Q	TM	KV450	-040	133	106	108	116
147098 *)	53528	K4O	Q	A5	KV450	-040	80	104	97	94
147098 *)	53528	K4O	Q	A6	KV450	-040	55	70	68	64
147098 *)	53528	K4O	Q	TM	KV450	-040	145	137	167	150
147099	53528	K4O	Q	A5	KV450	-040	91	64	64	73
147099	53528	K4O	Q	A6	KV450	-040	87	56	60	68
147099	53528	K4O	Q	TM	KV450	-040	136	229	145	170
147100 *)	53528	K4O	Q	TM	KV450	-040	128	109	107	115
147105	26037	K4O	Q	A5	KV	-040	53	59	55	56
147105	26037	K4O	Q	A6	KV	-040	54	58	34	49
147105	26037	K4O	Q	TM	KV450	-040	179	153	122	151
147107	26037	K4O	Q	A5	KV450	-040	106	118	98	107
147107	26037	K4O	Q	A6	KV450	-040	78	80	76	78
147107	26037	K4O	Q	TM	KV450	-040	147	153	206	169

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 23/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35 DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
147114	24964	K4O	Q	A5	KV450	-040	125	94	134	118
147114	24964	K4O	Q	A6	KV450	-040	118	33	83	78
147114	24964	K4O	Q	TM	KV450	-040	260	254	253	256
147116	24964	K4O	Q	A5	KV450	-040	109	103	75	96
147116	24964	K4O	Q	A6	KV450	-040	35	72	103	70
147116	24964	K4O	Q	TM	KV450	-040	253	255	227	245
147119	24964	K4O	Q	TM	KV450	-040	283	166	190	213
147160	26009	K4O	Q	A5	KV450	-040	258	265	285	269
147160	26009	K4O	Q	A6	KV450	-040	220	186	127	178
147160	26009	K4O	Q	TM	KV450	-040	274	262	227	254
147161	26009	K4O	Q	TM	KV450	-040	259	259	271	263
147163	26007	K4O	Q	A5	KV450	-040	226	206	219	217
147163	26007	K4O	Q	A6	KV450	-040	195	201	217	204
147163	26007	K4O	Q	TM	KV450	-040	260	229	272	254
147201	53744	K4O	Q	A5	KV450	-040	360	331	340	344
147201	53744	K4O	Q	A6	KV450	-040	233	251	259	248
147201	53744	K4O	Q	TM	KV450	-040	230	284	283	266
147463	26009	K4O	Q	TM	KV600	-040	110	133	161	135
147464	53565	K4O	Q	A5	KV450	-040	69	88	73	77
147464	53565	K4O	Q	A6	KV450	-040	65	75	70	70
147464	53565	K4O	Q	TM	KV450	-040	148	149	134	144
147469	53565	K4O	Q	A5	KV450	-040	115	138	108	120
147469	53565	K4O	Q	A6	KV450	-040	103	102	83	96
147469	53565	K4O	Q	TM	KV450	-040	216	197	196	203
147470	24964	K4O	Q	TM	KV450	-040	201	173	160	178
147479	24964	K4O	Q	A5	KV450	-040	249	199	210	219

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser (A06) — Empfänger / Customer (A06)

Erzeugnis / Product: Grobblech / Heavy plate (B01)

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 K1, B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Probon-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
147479	24964	K4O	Q	A6	KV450	-040	142	170	165	159
147479	24964	K4O	Q	TM	KV450	-040	175	238	212	208
147485	53565	K4O	Q	TM	KV450	-040	154	136	133	141
147490	53565	K4O	Q	TM	KV450	-040	157	127	136	140
147495	53565	K4O	Q	TM	KV600	-040	139	163	159	154
147511	53528	K4O	Q	A5	KV450	-040	133	122	105	120
147511	53528	K4O	Q	A6	KV450	-040	108	94	118	107
147511	53528	K4O	Q	TM	KV600	-040	204	200	181	195
147512	26009	K4O	Q	A5	KV450	-040	120	161	121	134
147512	26009	K4O	Q	A6	KV450	-040	121	90	83	98
147512	26009	K4O	Q	TM	KV600	-040	255	228	237	240
147514	25832	K4O	Q	A5	KV450	-040	212	191	246	216
147514	25832	K4O	Q	A6	KV450	-040	151	155	186	164
147514	25832	K4O	Q	TM	KV600	-040	241	247	222	237
147525	24695	K4O	Q	A5	KV450	-040	269	243	267	260
147525	24695	K4O	Q	A6	KV450	-040	132	227	223	194
147525	24695	K4O	Q	TM	KV450	-040	179	272	182	211
147527	24964	K4O	Q	TM	KV450	-040	175	195	207	192
147531	53528	K4O	Q	A5	KV450	-040	115	155	159	143
147531	53528	K4O	Q	A6	KV450	-040	132	127	108	122
147531	53528	K4O	Q	TM	KV600	-040	212	197	201	203
147532	26008	K4O	Q	A5	KV450	-040	123	117	204	148
147532	26008	K4O	Q	A6	KV450	-040	117	129	192	146
147532	26008	K4O	Q	TM	KV600	-040	212	155	226	198
147533	26008	K4O	Q	A5	KV450	-040	109	137	137	128
147533	26008	K4O	Q	A6	KV450	-040	87	126	112	108

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 25/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger / Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
147533	26008	K4O	Q	TM	KV600	-040	191	148	174	171
147534	26008	K4O	Q	A5	KV450	-040	208	142	141	164
147534	26008	K4O	Q	A6	KV450	-040	102	158	124	128
147534	26008	K4O	Q	TM	KV600	-040	157	127	197	160
147800	24964	K4O	Q	TM	KV450	-040	163	154	157	158
147802	68832	K4O	Q	A5	KV450	-040	279	168	177	208
147802	68832	K4O	Q	A6	KV450	-040	144	251	158	184
147802	68832	K4O	Q	TM	KV450	-040	157	256	215	209
147804	25832	K4O	Q	A5	KV450	-040	185	203	184	191
147804	25832	K4O	Q	A6	KV450	-040	163	176	154	164
147804	25832	K4O	Q	TM	KV450	-040	137	150	193	160
147805	14711	K4O	Q	A5	KV450	-040	229	201	298	243
147805	14711	K4O	Q	A6	KV450	-040	134	163	206	168
147805	14711	K4O	Q	TM	KV450	-040	255	180	161	199
149385	26005	K4O	Q	A5	KV450	-040	200	228	176	201
149385	26005	K4O	Q	A6	KV450	-040	139	156	139	145
149385	26005	K4O	Q	TM	KV450	-040	179	224	204	202

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert 5% / aged: 5%
A6: gealtert 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5% plastische Verformung,ungealtert
A6: 5% plastische Verformung, 1h bei 250°C gealtert

Treatment of testcoupons:
A5: 5% plastically strained, unaged
A6: 5% plastically strained, 1h aged at 250°C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT
18 64
DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 26/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08): 0000100512

Lieferschein-Nr. Dispatch note No.: 0088503535 / 14.10.2019

Abnahme Inspection (A05): DNVGL **N141U2Y6**

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV - classed objects is subject to special consideration.

Prequalified for opt.18, Annex E of EN 10225

Material gem. Optionen 2,6,10,12,13 der EN 10225
Material according to options 2,6,10,12,13 of EN 10225

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung (StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage III, Spalte 5) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.

Our products are free of radioactive substances and do not exceed the clearing limit value of 100 Bq/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 18 84 DNV·GL

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3135**
REV.	**00**
DATE - *DATA*	**09.01.2024**
PAGE - *PAGINA*	**1 of 1**

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3135**	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548,1	551,9	547,1	552,9	549,6	550,6	550,5	550,3	549,3	550,3	550,1	549,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
				MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Ovality	5,5	5,5												
	Dia UL														
	Dia LL			547,7	550,7	3	548	553,3	5,3	548,2	553,4	5,2	548,9	551,8	2,8

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,21	20,35

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10011

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	6,1

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,5

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	2,6	1,8	2,2	2,7

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	1,1	1,5	1,5	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3136**
REV.	**00**
DATE - *DATA*	**08.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3136**	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	549,6	550,7	550,9	550,8	549,3	550,3	550,5	550,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	5,5	5,5	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			547,7	551,2	3,6	548,9	552,3	3,5	548,7	551,9	3,2	549,1	551,5	2,4

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,36	20,41

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10012

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	7,5

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	2,8	2,6	2,9	2,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,7	0,3	0,2	0,1

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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Pordenone - Italy
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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No. **2023-263-DIM-23-3137**
REV. **00**
DATE - *DATA* **08.01.2024**
PAGE - *PAGINA* **1 of 1**

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3137	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
EEMUA 158	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	550,5	551	551	550,9	550	550,5	550,5	550,5

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	5,5	5,5	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			547,8	552,2	4,4	549,1	553	3,9	548,8	552,2	3,4	548,1	552	3,9

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,28	20,31

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10012

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	7

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	3	3	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,5	0,6	0,4	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

NOTES:
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Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3138**
REV.	**00**
DATE - *DATA*	**08.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3138**	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	550,1	550,7	550,9	550,5	549,7	550,3	550,4	550,1

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	5,5	5,5	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			547,1	552,3	5,2	548,6	553,5	4,9	547,3	552,5	5,2	546,9	552,1	5,2

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,23	20,27

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10010

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,7	3	2,7

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,8	0,3	0,2	0,4

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

NOTES:
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FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3139**
REV.	**00**
DATE - *DATA*	**10.01.2024**
PAGE - *PAGINA*	**1 of 1**

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3139**	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598	602	598	602	600	601	601,3	600,8	599,7	600,7	600,9	600,6

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			597	601,5	4,5	599	602,4	3,4	599,7	602,5	2,8	599	602	2,9

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,33	20,49

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	6

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,8

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,6	3	1,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	1,1	0,7	0,1	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	3	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

NOTES:
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The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3140**
REV.	**00**
DATE - *DATA*	**21.12.2023**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3140**	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600,2	600,8	601	600,7	599,8	600,6	600,6	600,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			597,9	601,8	3,9	598,6	602,4	3,8	597,5	603,4	5,9	597,9	603,7	5,8

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,36	20,59

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	3,8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,6	2,7	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,2	0,4	0,8	1,2

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,6	0,7	0,7	0,7

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

907/ 3402

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3141**
REV.	**00**
DATE - *DATA*	**09.01.2024**
PAGE - *PAGINA*	**1 of 1**

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3141**	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600	600,6	600,9	600,5	599,7	600,4	600,6	600,3

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL			597,4	601,8	4,5	598,7	603,6	5	599,1	603,1	4,1	597,8	602,9	5,1
	Dia LL														

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,24	20,34

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	5

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,4

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,2	1	1,2	2

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	1,3	1,1	1,5	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No. **2023-263-DIM-23-3142**
REV. **00**
DATE - *DATA* **09.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3142	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
EEMUA 158	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600,2	600,8	600,9	600,3	599,8	600,4	600,5	600

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL			597,6	602,8	5,2	598,2	604,2	6	598,6	604,1	5,5	596,5	602,4	5,9
	Dia LL														

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,32	20,43

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	3,4

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,4	2,4	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	0,8	1	1

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3144D**
REV.	**00**
DATE - *DATA*	**11.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3144D**	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,8	800,8	800,5	800,1	800,6	800,6	800,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			797,9	803	5,1	797,9	803,2	5,2	798,6	802,6	4	797,7	803,4	5,7

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	19,76	20,55

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3745

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	2,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,9

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,9	1,9	1,3	1,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	0,2	0,3	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3145**
REV.	**00**
DATE - *DATA*	**10.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3145**	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	797,1	802,9	799,4	800,4	800,8	800,2	799,1	800,1	800,5	800

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			796,8	802,1	5,3	797,2	802,7	5,5	797,9	803,2	5,3	797,8	803,4	5,6

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,60	20,70

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3743

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	2,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	1,2

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,5	2,1	1,8

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,8	0,2	0,1	0,6

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

NOTES:
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Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3146**
REV.	**00**
DATE - *DATA*	**11.01.2024**
PAGE - *PAGINA*	**1 of 1**

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	**IOP-DIM-2023-263-01 rev. 0**	**23-3146**	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,5	800,5	800,2	800,1	800,3	800,2	799,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			797,7	803,6	5,9	797,5	803,5	6	797,8	803,2	5,4	797,8	802,2	4,4

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,48	20,58

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3744

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	1,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,5

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,8	2	2,1	2,8

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,9	0,8	0,4	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	**2023-263-DIM-23-3147**
REV.	**00**
DATE - *DATA*	**11.01.2024**
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3147	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,2	800,1	800,2	800,1	800	799,9	799,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			797,5	803,4	5,9	797,6	802,9	5,3	797,5	803,2	5,7	797,3	802,7	5,4

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,56	20,61

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3744

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	1,8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,7	1,7	1,8	1,9

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	1,3	0,9	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy

Stabilimento di San Giorgio di Nogaro

RAPPORTO ESAME VISIVO SALDATURA
- longitudinal welds -

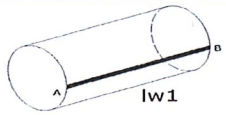
WELD VISUAL TEST REPORT
- saldature longitudinali -

Nr. Certificato / *Report Nr.*	2023263/VT/01
Foglio: / *Sheet:*	1 di 1
Data emissione: / *Issue Date:*	24/01/2024

DATI GENERALI - GENERAL DATA

CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	N.A.
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	EEMUA 158 par. 7.4.1	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-VT-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	EEMUA 158 Table 14	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	AS WELDED AFTER CLEANING *AS WELDED AFTER CLEANING*
CONDIZIONI DI ILLUMINAMENTO: *ILLUMINANCE AT THE SURFACE*	≥ 500 lx (use of artificial light when necessary)	**STRUMENTAZIONE:** *TEST DEVICES:*	None
TRATTAMENTO TERMICO: *HEAT TREATMENT CONDITION:*	none	**TIPO DI ISPEZIONE:** *INSPECITION TYPE:*	DIRETTA / *DIRECT* ☑ REMOTA / *REMOTE* ☐

SCHEMI - SKETCHES



RISULTATI DEL CONTROLLO - TEST RESULT

ELEMENTO ITEM	NUMERO SALDATURA WELD NUMBER	TIPO DI SALDATURA WELD TYPE	ESTENS. CONTROLLO [%] EXTENT OF EXAMINATION [%]	DATA ISPEZIONE INSPECTION DATE	ESITO (*) RESULT	DISCONTINUITÀ (**) DISCONTINUITY	NOTE REMARKS
23-3135	LW1	Butt Weld	100	21/12/2023	A	-	-
23-3136	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3137	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3138	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3139	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3140	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3141	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3142	LW1	Butt Weld	100	08/01/2024	A	-	-
23-3144/d	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3145	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3146	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3147	LW1	Butt Weld	100	20/12/2023	A	-	-

NOTE - REMARKS:

Conformity of FIT UP before welding (Gap, Misalignment, other imperfections) has been verified with visual examination.

(*) **A** = CONFORME / ACCEPTABLE || **NC** = NON CONFORME / NOT ACCEPTABLE

REMARKS: VT extent - From Outside: 100% of longitudinal welds after weld completion. From inside: for diameter less than 800mm, the welds is inspected for a lenght equal to the outer diameter at both pipe ends, for diameter equal to or greater than 800mm, 100% of longitudinal internal welds after weld completion.

Cimolai S.p.A* Q.C.S. OPERATOR	Cimolai S.p.A** Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Rappresentante del cliente Client Representative
M. MACOR ISO 9712 - VT LEV. 2		CIMOLAI S.p.A. Quality Control Department Date 24/01/24 Signature	

CIMOLAI
Pordenone - Italy

Stabilimento di San Giorgio di Nogaro

RAPPORTO ESAME MAGNETOSCOPICO
- saldature longitudinali -

MAGNETOSCOPIC TEST REPORT
- longitudinal welds -

Nr. Certificato / *Report Nr.*	2023263/MT/01
Foglio: / *Sheet:*	1 of 1
Data emissione: / *Issue Date:*	24/01/2024

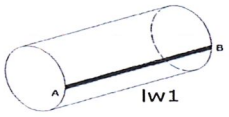
DATI GENERALI - GENERAL DATA

CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	HOLLANDSE KUST NOORD WIND PARK Project, 1723001802 rev. 01
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	EEMUA 158 ed. 3 par. 7.4.4	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-MT-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	EEMUA 158 ed. 3 par. 7.5.5	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	COME SALDATO DOPO PULIZIA *AS WELDED AFTER CLEANING*
CONDIZIONI DI ILLUMINAMENTO: *ILLUMINANCE AT THE SURFACE*	≥ 500 lx (use of artificial light when necessary)	**TRATTAMENTO TERMICO:** *HEAT TREATMENT CONDITION:*	none
APPARECCHIATURA: *INSTRUMENT:*	CGM JOKE TWIST - SN 21198	**TIPO POLI:** *TYPE OF POLES:*	ARTICOLATI *ARTICOLATED*
TIPO DI CORRENTE / INTENSITÀ *TYPE OF CURRENT / INTENSITY*	AC	**DISTANZA POLI:** *POLES DISTANCE:*	150 / 200 mm
PROVA DI MAGNETIZZAZIONE: *TEST OF MAGNETIZATION:*	LIFT TEST 4,5 kg	**SEQUENZA DI MAGNETIZZAZIONE:** *MAGNETIZATION SEQUENCE:*	Two directions at 90° each other, 45° respect to weld axis

MEZZI DI RILEVAMENTO - DETECTION MEDIA

MEZZO RILEVATORE: *DETECTION MEDIA:*	BLACK - WET POWDER LK 35 S - C.G.M.	**MEZZO DI CONTRASTO:** *CONTRAST AID:*	WHITE - VECOPLAST V42 C.G.M.

SCHEMI - SKETCHES



RISULTATI DEL CONTROLLO - TEST RESULT

ELEMENTO ITEM	NUMERO SALDATURA WELD NUMBER	TIPO DI SALDATURA WELD TYPE	ESTENS. CONTROLLO [%] EXTENT OF EXAMINATION [%]	DATA ISPEZIONE INSPECTION DATE	ESITO (*) RESULT	DISCONTINUITÀ DISCONTINUITY	NOTE REMARKS
23-3135	LW1	Butt Weld	100	21/12/2023	A	-	-
23-3136	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3137	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3138	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3139	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3140	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3141	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3142	LW1	Butt Weld	100	08/01/2024	A	-	-
23-3144/d	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3145	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3146	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3147	LW1	Butt Weld	100	20/12/2023	A	-	-

NOTE - REMARKS:

(*) **A** = CONFORME / *ACCEPTABLE* || **NC** = NON CONFORME / *NOT ACCEPTABLE*

REMARKS:

Cimolai S.p.A Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Ente Collaudatore Testing Authority	Rappresentante del cliente Client Representative
CIMOLAI S.p.A. Quality Control Department V. PONTE - 15/01/24	CIMOLAI S.p.A. Quality Control Department Date 24/01/24 Signature		915/ 3402

CIMOLAI
San Giorgio di Nogaro Workshop

RAPPORTO ESAME ULTRASONORO
- saldature longitudinali -

ULTRASONIC TEST REPORT
- longitudinal welds -

Nr. Certificato / *Report Nr.*	2023263/UT/01
Foglio: / *Sheet:*	1 di 1
Data emissione: / *Issue Date:*	24/01/2024

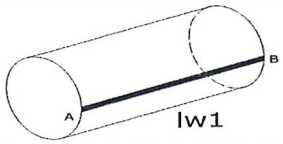
DATI GENERALI - GENERAL DATA

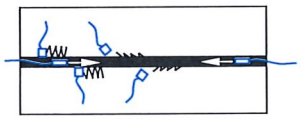
CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	HOLLANDSE KUST NOORD WIND PARK Project, 1723001802 rev. 01
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	ISO 17640 lev. B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-UTE-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	ISO 11666 lev.2 2Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	AS WELDED AFTER CLEANING *AS WELDED AFTER CLEANING*
PROCESSO SALDATURA: *WELDING PROCESS:*	SAW	**MEZZO DI ACCOPPIAMENTO:** *COUPLANT :*	METYLCELLULOSE GLUE *METYLCELLULOSE GLUE*
APPARECCHIATURA: *INSTRUMENT:*	Olympus EPOCH650 Sn.160161102	**BLOCCO CAMPIONE TARATURA:** *CALIBRATION BLOCK:*	SMI 1
TRATTAMENTO TERMICO: *HEAT TREATMENT CONDITION:*	none		

CARATTERISTICHE SONDE DI CONTROLLO - PROBE INSPECTION SPECIFICATIONS

ID *ID*	SONDA / Nr. SERIE *PROBE / SERIAL Nr.*	ONDE *WAVES*	ANG. *ANGLE*	DIMENSIONE *CRYSTAL SIZE*	FREQUENZA *FREQUENCY*
-	-	-	[Deg.]	-	[MHz]
1	GE MSEB4	Long.	0°	Ø10	4
2	GE MKW 70-4	Tranv.	70°	8x9	4
3	GE MKW 60-4	Tranv.	60°	8x9	4
4	IMG TA-45-4P	Tranv.	45°	8x9	4
5	IMG STA 70-2	Tranv.	70°	14x14	2
6	IMG STA 60-2	Tranv.	60°	14x14	2
7	IMG STA 45-2	Tranv.	45°	14x14	2

SCHEMI - SKETCHES





RISULTATI DEL CONTROLLO - TEST RESULT (part 1-1)

ELEMENTO ITEM	NUMERO SALDATURA WELD NUMBER	TIPO GIUNTO WELD TYPE	Transducer angle	Extent of examination	Decibels				Indication				ESITO RESULT (**)	DATA ISPEZIONE INSPECTION DATE	NOTE REMARKS
					Indication level (%) a	Reference level b	Attenuation factor c	Indication rating d	Length	Angular distance (sound path)	Depth from "A" surface	Distance from A			
23-3135	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	21/12/2023	-
23-3136	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3137	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3138	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3139	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	09/01/2024	-
23-3140	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3141	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3142	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	08/01/2024	-
23-3144/d	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	09/01/2024	-
23-3145	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3146	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3147	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-

NOTE - REMARKS:

NOTE - REMARKS:
UT performed on longitudinal weld and on pipe body for a lenght of 100mm on each pipe end,
UT test performed only on the external part of pipe.

(**) EVALUATION — A = ACCETTABILE / ACCEPTABLE (no indications) — NA = INDICAZIONE NON ACCETTABILE / UNACCEPTABLE INDICATION

Cimolai S.p.A Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Ente Collaudatore Testing Authority	Rappresentante del cliente Client Representative
CIMOLAI S.p.A. Valentino Ponte QUALITY CONTROL DEPARTMENT V.PONTE-150712-UTLEV.2	CIMOLAI S.p.A. Quality Control Department Date ottobre Signature		

Italsabi

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC TEST REPORT

Rapporto	2023263/RT/06	
DATA	Fg	Di
19/01/2024	1	3

Cliente CUSTOMER	CIMOLAI S.P.A.			**Costruttore** BUILDER	-
Ordine ORDER	N.A.	**Commessa**	2023263	**Disegno** DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			**Norma di Riferimento** STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			**Criterio di accettabilità** ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR.ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	MATERIALE MATERIAL Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3135	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.5 - 3.8	13	05/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3136	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.6 - 3.9	13	05/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3136	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.3 - 3.5	13	05/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13	23-3137	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.4 - 3.8	13	05/01/2024	None	A
14	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
15	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
16														
17	23-3138	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.4 - 3.7	13	05/01/2024	None	A
18	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
19	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
Ab (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3.4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	**Kv**	250	**mA**	3	**Curie** CURIES	-	**Macchia focale mm** FOCAL SIZE	3,0 x 3,0		
Densità Film FILM DENSITY	1,8% - 4,0%	**Distanza Fuoco - Oggetto** Ug = F x d / D			680	**Distanza lato Sorgente - Film** DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM			20		
Penetrametro I.Q.I. PENETRAMETER	**EN**	✖	**ASTM**		**Posizione I.Q.I.** IQI POSITION		**Lato Sorgente** SURCE SIDE	✖	**Lato Film** FILM SIDE		**TIPO IQI** IQI CLASS	**ASTM 1B**
Film FILM	KODAK AA400	**Formato** SIZE	10X48	**Film Singolo** SINGLE FILM	✖	**Film Doppio** DOUBLE FILM		**Schermi 0,05 - 0,10** INTENSIFYNG SCREEN	✖	**Svil. Aut.** DEVELOPMENT	✖

Tecnico TECHNICIAN

ITALSABI S.r.l.
Italsabi
Zoral Francesco
Level II UT - MT - PT - VT - RT ISO 9712
Level II UT - MT - PT - VT - RT SNT TC 1A
CSWIP 3.1
19/1/24

QCM

CIMOLAI S.p.A.
Quality Control Department
Date 19/01/24
Signature

A.I.

Italsabi

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC TEST REPORT

Rapporto	2023225/RT/06	
DATA	Fg	Di
19/01/2024	2	3

Cliente CUSTOMER	CIMOLAI S.P.A.			**Costruttore** BUILDER	-
Ordine ORDER	N.A.	**Commessa**	2023263	**Disegno** DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			**Norma di Riferimento** STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			**Criterio di accettabilità** ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR.ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	MATERIALE MATERIAL Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3139	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.3 - 3.7	13	05/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3140	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.2 - 3.6	13	05/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3141	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.7 - 3.8	13	05/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13	23-3142	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.2 - 3.7	13	09/01/2024	None	A
14	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
15	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
16														
17	23-3144	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.8 - 3.8	13	08/01/2024	None	A
18	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
19	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
Ab (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3-4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	**Kv**	250	**mA**	3	**Curie** CURIES	-	**Macchia focale mm** FOCAL SIZE	3,0 x 3,0		
Densità Film FILM DENSITY	1,8% - 4,0%	**Distanza Fuoco - Oggetto** Ug = F x d / D			680	**Distanza lato Sorgente - Film** DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM			20		
Penetrametro I.Q.I. PENETRAMETER	**EN**	✖	**ASTM**		**Posizione I.Q.I.** IQI POSITION		**Lato Sorgente** SURCE SIDE	✖	**Lato Film** FILM SIDE		**TIPO IQI** IQI CLASS **10 FEEN**
Film FILM	KODAK AA400	**Formato** SIZE	10X48	**Film Singolo** SINGLE FILM	✖	**Film Doppio** DOUBLE FILM		**Schermi 0,05 - 0,10** INTENSIFYNG SCREEN	✖	**Svil. Aut.** DEVELOPMENT	✖

Tecnico TECHNICIAN

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CSWIP 3.1
19/01/24

QCM

CIMOLAI S.p.A.
Quality Control Department
Date 19/01/24
Signature

A.I.

Italsabi

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC TEST REPORT

Rapporto	2023225/RT/06	
DATA	Fg	Di
19/01/2024	3	3

Cliente CUSTOMER	CIMOLAI S.P.A.			**Costruttore** BUILDER	-
Ordine ORDER	N.A.	**Commessa**	2023263	**Disegno** DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			**Norma di Riferimento** STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			**Criterio di accettabilità** ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR.ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	MATERIALE MATERIAL Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3145	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.2 - 3.8	13	11/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3146	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.3 - 3.8	13	10/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	B	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3147	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.3 - 3.8	13	11/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	B	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13														
14														
15														
16														
17														
18														
19														
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
Ab (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3-4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	**Kv**	250	**mA**	3	**Curie** CURIES	-	**Macchia focale mm** FOCAL SIZE	3,0 x 3,0		
Densità Film FILM DENSITY	1,8% - 4,0%	**Distanza Fuoco - Oggetto** Ug = F x d / D		680		**Distanza lato Sorgente - Film** DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM		20			
Penetrametro I.Q.I. PENETRAMETER	**EN** ✖	**ASTM**		**Posizione I.Q.I.** IQI POSITION		**Lato Sorgente** SURCE SIDE	✖	**Lato Film** FILM SIDE		**TIPO IQI** IQI CLASS	**10 FEEN**
Film FILM	KODAK AA400	**Formato** SIZE	10X48	**Film Singolo** SINGLE FILM	✖	**Film Doppio** DOUBLE FILM		**Schermi 0,05 - 0,10** INTENSIFYNG SCREEN	✖	**Svil. Aut.** DEVELOPMENT	✖

Tecnico TECHNICIAN

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CSWIP 3.1
19/01/24

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CIMOLAI S.p.A.
Quality Control Department
Date 19/1/24
Signature

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Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
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RAPPORTO DI PROVA / TEST REPORT

Prodotto Product	Id. Cliente Client Id.	Ricevuto il Received on	Id. Global Test Global Test Id.	Dimensioni dichiarate Declared dimensions	Materiale dichiarato Declared material	Note Remarks
Weld Coupon	23-3144T(*)	12/01/2024	13910	Thk 20 mm	S460MLO EN 10025-1	Job no.: 2023263 Doc. No.: 2023263/TAL/01 rev. 00 Heat nr.: 861927 Plate No.: 170991/1 **PRODUCTION TESTS**

Prove eseguite e Normative di riferimento Performed Tests and Reference Standards	Eseguita il Performed on	Esecuzione Testing by
Room temperature tensile test according to UNI EN ISO 4136:2022 + UNI EN ISO 6892-1:2020	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Room temperature tensile test according to UNI EN ISO 5178:2019 + UNI EN ISO 6892-1:2020	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Bend test according to UNI EN ISO 5173:2012	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Charpy Impact Test according to UNI EN ISO 148-1:2016 + UNI EN ISO 9016:2022	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Macrographic examination according to UNI EN ISO 17639:2022	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Hardness test according to UNI EN ISO 6507-1:2018	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐

Non è permessa la riproduzione parziale del presente rapporto di prova senza l'autorizzazione di Global Test. Il campionamento dei saggi è stato effettuato a cura del Cliente. I risultati riportati nel presente documento si riferiscono esclusivamente alle prove effettuate sui saggi consegnati in laboratorio così come ricevuti ed indicate in tabella "identificazione cliente". I residui dei saggi lavorati e le provette verranno conservati per 1 mese; dopo tale periodo verranno rottamati. Il presente documento è archiviato per minimo di 10 anni. Quando riportata, l'incertezza di misura è espressa con fattore di copertura k=2 pari a livello di fiducia del 95% circa.

Partial reproduction of this report without Global Test authorization is strictly forbidden. The sampling of materials was performed by Customer. The test results given here, only refer to tests carried out on materials delivered in the laboratory as received and shown in table "Client identification". The residual of samples machined and test samples will be kept for 1 month; after which they will be scrapped. This document will be kept in memory for 10 years at least. When reported, the uncertainty of measurement is expressed with a coverage factor k = 2 equal to 95% level of confidence.

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ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Room temperature tensile test according to UNI EN ISO 4136:2022 + UNI EN ISO 6892-1:2020	None

PROVA DI TRAZIONE / TENSILE TEST

Identificativo Campione Sample Identification		**Provino** Specimen	**Posizione** Position	**Dimensioni** Dimensions	**Area** Area	**Carico Max** Maximum Load **F_m**	**Carico Rottura** Ultimate Tensile Strength **Rm**	**Aspetto frattura** Fracture Appearance	**Zona rottura** Fracture Location
Cliente / Client	**Lab**. / Lab.			mm	mm^2	N	MPa		
23-3144T(*)	13910 / 1	F	TW	19.89 x 19.00	377.9	235344	623	Ductile	In Weld
23-3144T(*)	13910 / 2	F	TW	19.99 x 19.00	379.8	237624	626	Ductile	In Weld
Values according to Doc. No. 2023263/TAL/01 rev. 00:							**> 520**	***	***

Posizione: *Position:*	**Tipo di campione:** *Specimen Tipe:*	**Tipo di velocità di prova:** *Testing Rate method:*
TB: trasversale in materiale base / transversal on base metal LB: longitudinale in materiale base / longitudinal on base metal TW: trasversale attraverso saldatura / transversal across weld metal LW: longitudinale su saldatura / longitudinal on weld metal	F – prismatica / flat C – cilindrica / cilyndrical T – tubo intero / entire pipe P – provetta da tubo / specimen from pipe	"A224" method

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ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
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Prove eseguite e Normative di riferimento – Performed Tests and Reference Standards	Standards Correlati – Related Standards
Room temperature tensile test according to UNI EN ISO 5178:2019 + UNI EN ISO 6892-1:2020	None

PROVA DI TRAZIONE / TENSILE TEST

Identificativo Campione Sample Identification		**Provino** Specimen	**Posizione** Position	**Dimensioni** Dimensions	**Area** Area	**Lunghezza Iniziale** Original Length L_0	**Snervamento** Yield Strength **Reh**	**Rt0.5%** Rt0.5%	**Rottura** Tensile Strength **Rm**	**Rt0.5%/Rm** Rt0.5%/Rm	**Allungamento** Elongation **A**	**Strizione** Area Reduction **Z**	**Zona di rottura** Break position
Cliente / Client	**Lab**. / Lab.			mm	mm^2	mm	MPa	MPa	MPa		**%**	**%**	
23-3144T(*)	13910 / 3	C	LW-T/3	Ø 12.63	125.3	50.0	531	530	615	0.86	26.4	74.0	***
Values according to Doc. No. 2023263/TAL/01 rev. 00:							**> 440**	**> 440**	**> 520**	***	**> 20**	***	***

Posizione: *Position:*	**Tipo di provino:** *Specimen Type:*	**Tipo di velocità di prova:** *Testing Rate method:*
TB: trasversale in materiale base / transversal on base metal LB: longitudinale in materiale base / longitudinal on base metal TW: trasversale attraverso saldatura / transversal across weld metal	F – prismatica / flat C – cilindrica / cilyndrical T – tubo intero / entire pipe	"A224" method

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ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
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LW: longitudinale su saldatura / longitudinal on weld metal | P – provetta da tubo / specimen from pipe

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards
Bend test according to UNI EN ISO 5173:2012

Standards Correlati - Related Standards
None

PROVA DI PIEGA / BEND TEST

Identificativo Campione Sample Identification		**Posizione** Position	**Dimensioni** Dimensions	**Mandrino** Jig	**Angolo** Angle	**Distanza Rulli** Rolls Distance	**Esito** Results
Cliente / Client	**Lab**. / Lab.		mm	mm		mm	
23-3144T(*)	13910 / 4	SBB	19.9 x 10.2	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 5	SBB	19.8 x 10.3	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 6	SBB	19.9 x 10.2	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 7	SBB	19.8 x 10.4	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)

Tipo di provino: *Specimen Type:*	**Note:** Remarks:
TFBB: Piega trasversale al dritto / transversal face bend test TRBB: Piega trasversale al rovescio / transversal root bend test SBB: Piega trasversale laterali / transversal side bend test	Testing Procedure: Former Bend Test Test Temperature: (23±5)°C

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ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 5 di 5

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Charpy Impact test according to UNI EN ISO 148-1:2016	UNI EN ISO 9016:2022

PROVA DI RESILIENZA / CHARPY IMPACT TEST

Identificativo Campione Sample Identification		**Temperatura** Temperature	**Posizione** Position	**Dimensioni** Dimensions	**Intaglio** Notch	**Resilienza** Impact energy Joule				**Espansione laterale** Lateral expansion mm			
Cliente / Client	**Lab.** / Lab.	°C		mm		1	2	3	AVG	1	2	3	AVG
23-3144T(*)	13910 / 8	- 40	VWT 0/2	10.0 x 10.0	KV_2	70	60	100	77	0.52	0.52	1.12	0.72
23-3144T(*)	13910 / 9	- 40	VHT 0/2	10.0 x 10.0	KV_2	112	120	98	110	1.29	1.64	1.20	1.38
23-3144T(*)	13910 / 10	- 40	VHT 2/2	10.0 x 10.0	KV_2	100	132	144	125	1.10	1.50	1.53	1.38
23-3144T(*)	13910 / 11	- 40	VHT 5/2	10.0 x 10.0	KV_2	118	122	102	114	1.15	1.25	1.12	1.17
Values according to Doc. No. 2023263/TAL/01 rev. 00:						**> 35**			**> 46**	***			***

Posizione provino: *Position of specimen:*	**Note:** *Remarks:*
BM: Materiale Base / Base Metal VHT: Linea di Fusione / Fusion Line VWT: Zona Fusa / Weld Metal	Tempo di condizionamento provini: >15 min Conditioning time: >15 min 1) Valore approssimativo KV eccede 80% della capacità dell'apparecchiatura - Approximate KV value exceeds 80% of the equipment's capacity 2) Valore approssimativo di provino non rotto – Approximate value of unbroken specimen

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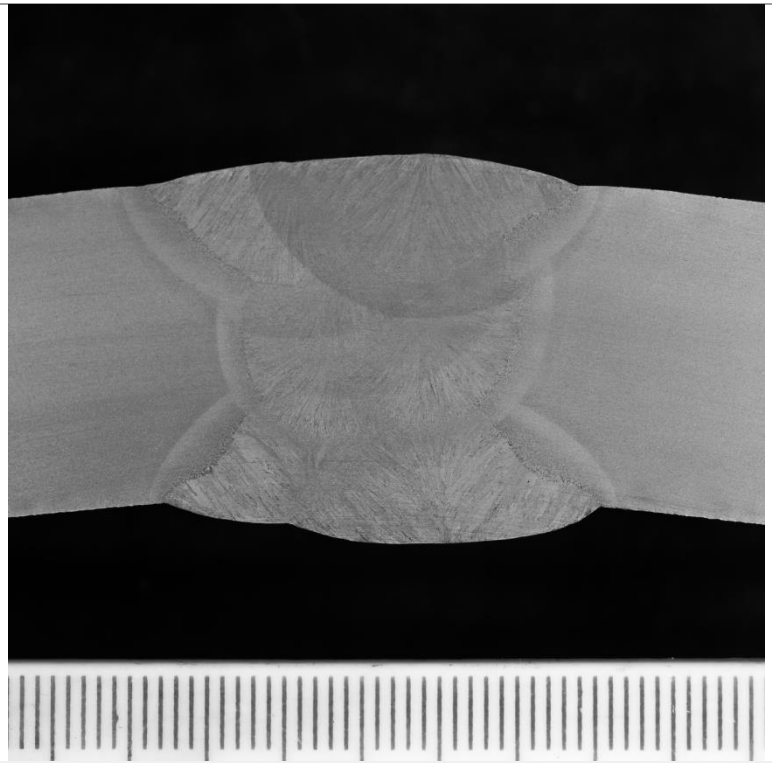
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ORDINE / ORDER N° Ordine 2024011531	DATA / DATE 15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT **30848**	DATA / DATE 19/01/2024
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Macrographic examination according to UNI EN ISO 17639:2022	UNI 3138:1984

ESAME MACROGRAFICO / MACROGRAPHIC EXAMINATION



Identificativo Campione Sample Identification	**Cliente** Client	23-3144T(*)
	Lab. Lab.	13910 / 12
Posizione Prelievo / Sampling position **Zona Esaminata /** Examinated Area		Transversal Weld Joint
Tipo di saldatura/ Weld Joint type		Butt Weld
Tipo di Attacco / Etching Type		Nital 10%
Metodo di attacco / Ethching method		Immersione – 30s Swabbing – 30s
Designazione / Designation		Esame-ISO 17639-A-E-1.2/1.2-1.2/1.2-A.1
Esito / Result (*)		No defects noted according to UNI EN ISO 5817:2014 Lev. B + UNI EN ISO 15614-1:2019 Lev.2 Para 7.5

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Seda B: operativa
Via A. Moro 10/C, 45026 Lendinara (RO)

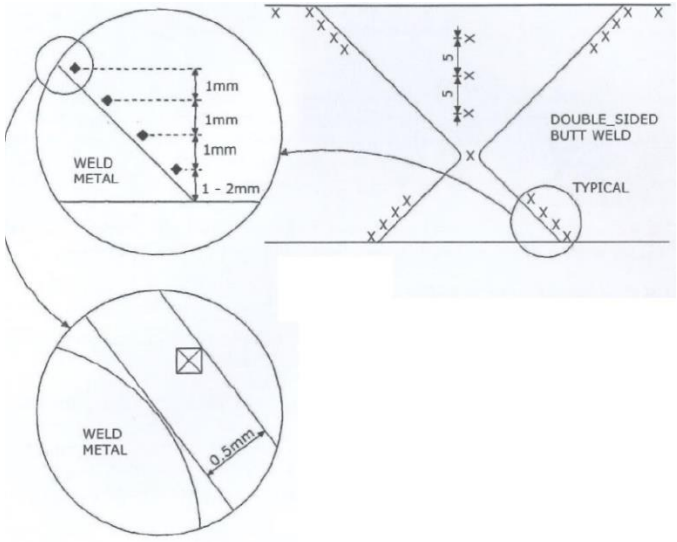
CLIENTE / CUSTOMER
CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

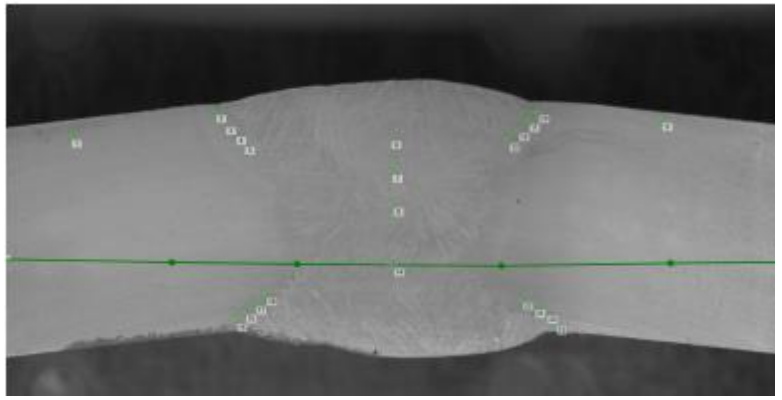
ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 7 di 7

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards (*)
Hardness test according to UNI EN ISO 6507-1:2018	EEMUA Publication 158 Ed. 3 Fig. 8

PROVA DI DUREZZA / HARDNESS TEST

Identificativo Campione Sample Identification		**Prova di durezza** Hardness Test	**Values according to Doc. No. S2023-06/TAL/00 rev. 00:**
Cliente / Client	**Lab.** / Lab.		
23-3144T(*)	13910 / 12	HV10	**< 325**





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
219	180	176	188	180	208	190	198	220	184	188	185	180	197	186	189	181	186	187	186	188	181

Approvato da: RESPONSABILE LABORATORIO
Marco Canato
GLOBAL TEST Srl

Spazio riservato ad eventuali approvazioni esterne / Space reserved for possible external approvals

GLOBAL TEST srl

LAB N° 1230 L

Seda A: legale, amministrativa e operativa
Via Venier,21/B – 30020 Marcon (VE)
Tel 041923994 - E-mail: laboratorio@globaltest.it
Seda B: operativa
Via A. Moro 10/C, 45026 Lendinara (RO)

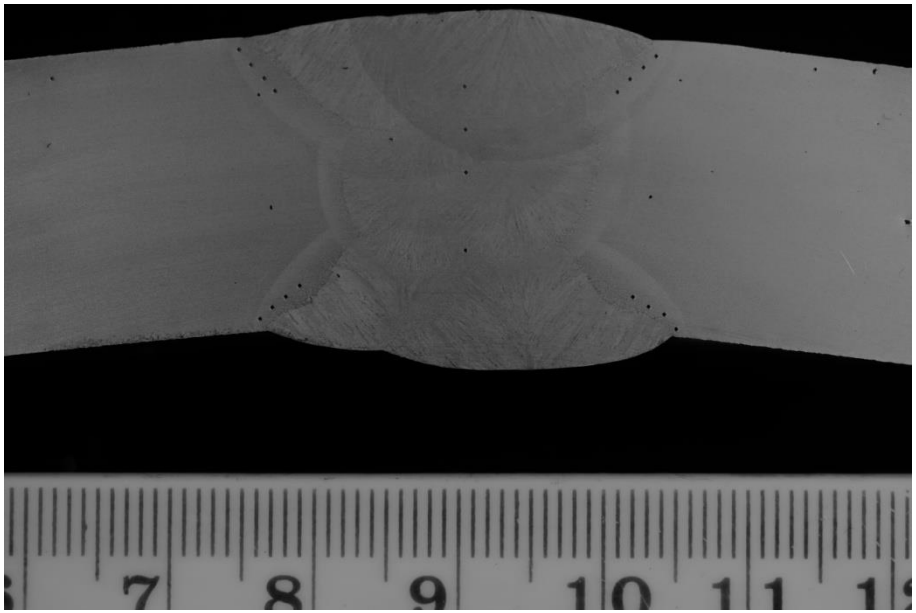
CLIENTE / CUSTOMER
CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 8 di 8

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Hardness test according to UNI EN ISO 6507-1:2018	None

FOTO DOPO LA PROVA DI DUREZZA / PHOTO AFTER HARDNESS TEST

Identificativo Campione Sample Identification	
Cliente / Client	**Lab**. / Lab.
23-3144T(*)	13910 / 12



Approvato da: RESPONSABILE LABORATORIO
Marco Canato
GLOBAL TEST Srl

Spazio riservato ad eventuali approvazioni esterne / Space reserved for possible external approvals

STRUMENTI USATI PER LE PROVE / EQUIPMENT USED FOR TESTS

Equipment used	Trademark		Calibration expiry (±15 days)
Digital Caliper	Borletti CDJB15	Sn: 032819-186295	27/10/2025
Tensile Test Machine – 1200kN	GALDABINI QUASAR 1200	Sn: VB3Z	13/03/2024
Electronic Exstensometer	GALDABINI MICRO	Sn: 34647	13/03/2024
Tensile Test Machine – 200kN	GALDABINI QUASAR 200	Sn: VB3V	13/03/2024
Electronic Extensometer	GALDABINI MICRO	Sn: GT015	13/03/2024
Hydraulic Press	OMCN P30/MR	Sn: 589557	-
Charpy pendulum	Wolpert PW30/15K	Sn: 1216	13/03/2024
Digital Thermometer + Probe	TC Direct + PT100	Sn: 220606695 + 220606695/PT100	11/06/2024
Camera	CANON EOS 4000D	Sn: 153070020586	-
Hardness Testing Machine	QNESS Q30A+	Sn: Q1788/02/20	13/03/2024

(*) Metodo di prova non accreditata da ACCREDIA – Ente Italiano di Accreditamento
Test method not accredited by ACCREDIA - Italian Accreditation System

La decorrenza del presente Rapporto di Prova coincide con la data di emissione del documento, posta in alto a destra. Non rileva il fatto che la firma digitale sia eventualmente apposta successivamente.
The effective date of this Test Report corresponds with the emission date, placed in the upper right corner. It does not have relevance the fact that the digital signature is eventually affixed afterwards.

Approvato da: RESPONSABILE LABORATORIO
Marco Canato
GLOBAL TEST Srl

Spazio riservato ad eventuali approvazioni esterne / Space reserved for possible external approvals

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002082	123A40D	Q012301666

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Mill Test Certificate

Certificate No. : 230807-FP01KS-0019A1-0001
Date of Issue : Sep. 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)
12x2500x12000	PP39772704	1	2,826	SU05736	T	459	571	30	1: 265 2: 254 3: 245 A: 255	L	0.1634	0.348	1.396	0.0113	0.0017	0.021	0.007	1	0.011	0.002	28	0.025	0.0129	0.002
										P	0.1587	0.338	1.353	0.0103	0.0017	0.018	0.009	1	0.013	0.003	28	0.025	0.0132	0.002
12x2500x12000	PP39960101-0104	4	11,304	SU06080	T	447	568	30	1: 82 2: 213 3: 216 A: 170	L	0.1546	0.336	1.379	0.0109	0.0021	0.023	0.007	1	0.011	0.002	37	0.025	0.0116	0.002
										P	0.1572	0.337	1.384	0.0105	0.0019	0.021	0.005	1	0.011	0.002	38	0.024	0.0120	0.002
12x2500x12000	PP39960001-0004	4	11,304	SU06082	T	444	561	31	1: 229 2: 252 3: 238 A: 240	L	0.1530	0.333	1.378	0.0094	0.0019	0.019	0.006	1	0.011	0.001	41	0.024	0.0124	0.002
										P	0.1515	0.326	1.361	0.0090	0.0022	0.019	0.002	1	0.010	0.002	32	0.023	0.0120	0.002
12x2500x12000	PP39959901-9904	4	11,304	SU06090	T	440	564	35	1: 165 2: 223 3: 246 A: 218	L	0.1556	0.338	1.382	0.0097	0.0018	0.021	0.002	1	0.010	0.002	35	0.025	0.0122	0.002
										P	0.1573	0.337	1.388	0.0091	0.0016	0.023	0.005	1	0.010	0.002	32	0.025	0.0130	0.002
12x2500x12000	PP40062501-2504	4	11,304	SU06198	T	454	563	29	1: 191 2: 222 3: 240 A: 218	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002
12x2500x12000	PP40062601-2604	4	11,304	SU06198	T	454	563	29	1: 191 2: 222 3: 240 A: 218	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002

1 | 249470 2 | 249471 3 | 249472

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 $\sqrt{A_o}$ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

posco

Mill Test Certificate

Certificate No. : 230807-FP01KS-0019A1-0001
Date of Issue : Sep., 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	Sol-Al (%)	Total-Al (%)	CEQ (%)
PP39772704	L	0.030	0.031	0.40
	P	0.030	0.031	
PP39960101-0104	L	0.030	0.032	0.39
	P	0.032	0.033	
PP39960001-0004	L	0.036	0.038	0.39
	P	0.036	0.036	
PP39959901-9904	L	0.029	0.030	0.39
	P	0.029	0.030	
PP40062501-2504	L	0.030	0.032	0.40
	P	0.031	0.031	
PP40062601-2604	L	0.030	0.032	0.40
	P	0.031	0.031	

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

posco

CE marking information

Certificate No. : 230807-FP01KS-0019A1-0001
Date of Issue : Sep., 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Product No.	CE 2814	POSCO Co., Ltd - Gwangyang Works 20-26, Pokposarang-gil, Gwangyang-si, Jeollanam-do, 57807, Korea 12 2814/CPR/0038/CPR/M U M/1210003/1
PP39772704 PP39960101-0104 PP39960001-0004 PP39959901-9904 PP40062501-2504 PP40062601-2604	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** : **EN10025-2** **Impact strength :** **Weldability :** **Durability :** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

POSCO

Mill Test Certificate

Certificate No. : 230807-FP01KS-0019A1-0002
Date of Issue : Sep. 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test YP (N/㎟)	Tensile Test TS	Tensile Test EL (%)	Impact Test V Notch -20 °C Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)
12x2500x12000	PP40062701-2704	4	11,304	SU06198	T	454	563	29	1: 191 2: 222 3: 240 A: 218	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002
12x2500x12000	PP40062201-2204	4	11,304	SU06198	T	451	559	30	1: 265 2: 284 3: 271 A: 273	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002
12x2500x12000	PP40062301-2304	4	11,304	SU06198	T	451	559	30	1: 265 2: 284 3: 271 A: 273	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002
12x2500x12000	PP40062401-2404	4	11,304	SU06198	T	451	559	30	1: 265 2: 284 3: 271 A: 273	L	0.1581	0.349	1.402	0.0088	0.0017	0.021	0.008	1	0.010	0.001	46	0.025	0.0129	0.002
										P	0.1657	0.351	1.402	0.0087	0.0014	0.020	0.004	1	0.010	0.002	38	0.025	0.0129	0.002
*** Sub Total (010) ***		37	104,562 (kg)																					
*** Heat Treatment ===> Normalizing rolling ***																								
15x2000x6000	PP39964701-4705	5	7,070	SU06081	T	424	555	28	1: 48 2: 182 3: 151 A: 127	L	0.1545	0.338	1.382	0.0095	0.0022	0.020	0.003	1	0.010	0.002	29	0.026	0.0115	0.002
										P	0.1561	0.338	1.380	0.0085	0.0020	0.020	0.004	1	0.011	0.002	27	0.024	0.0125	0.002

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CE EN10025-2 S355J2
2814

* Position : T : Top, M : Middle, B : Bottom
* Tensile Test Direction : Transversal, Gauge Length : 5.65 √A_o (Rectangular), YP Method : Upper Point
* Impact Test Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division : L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

posco

Mill Test Certificate

Certificate No. : 230807-FP01KS-0019A1-0002
Date of Issue : Sep., 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type. : EN10025-2 S355J2+N

Product No.	Division	Sol-Al (%)	Total-Al (%)	CEQ (%)
PP40062701-2704	L	0.030	0.032	0.40
	P	0.031	0.031	
PP40062201-2204	L	0.030	0.032	0.40
	P	0.031	0.031	
PP40062301-2304	L	0.030	0.032	0.40
	P	0.031	0.031	
PP40062401-2404	L	0.030	0.032	0.40
	P	0.031	0.031	
*** Sub Total (010) ***			37	104,562 (kg)
PP39964701-4705	L	0.031	0.031	0.39
	P	0.035	0.036	

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

posco

CE marking information

Certificate No. : 230807-FP01KS-0019A1-0002
Date of Issue : Sep., 06, 2023

Order No. : 01S6258315
PO No. : FNC230619 (FNC230619)
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Product No.	CE 2814	POSCO Co., Ltd - Gwangyang Works 20-26, Pokposarang-gil, Gwangyang-si, Jeollanam-do, 57807, Korea 12 2814/CPR/0038/CPR/M U M/1210003/1
PP40062701-2704 PP40062201-2204 PP40062301-2304 PP40062401-2404 PP39964701-4705	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** : **EN10025-2** **Impact strength :** **Weldability :** **Durability :** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging, Improper use of product can cause safety issues.

Surveyor To :

Park, Junyoung

CERTIFICATO DI CONTROLLO 3.1 / INSPECTION CERTIFICATE 3.1 - EN 10204:2004

A04/A05

METINVEST
FERRIERA VALSIDER SPA

A01 Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Via Antonio Salieri, 36 · 37050 Vallese di Oppeano VR, Italy
Phone +39 045 7133311 · Fax +39 39 045 7133394
Cap. Soc. Euro 22.700.937,00 i.v. · P.IVA 03067420236
C.F. e Reg. Imp. n. 13120560159 · REA 306151/VR
http://valsider.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N* = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + ANNEALED ;
M = LAMINAZIONE TERMOMECCANICA / Thermomechanical rolling
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 8*S
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A03 N° Certificato / Certificate no.: 204723

A02 Data / Date: 13/12/2023

A08 N° Ordine / Works order: 95233410

A07 N° Ordine cliente / Customer's order: mail

DDT: BOL 23022714

del / date: 12/12/2023

Pratica / File no.

del / date

A06 Cliente / Customer

FRANCHINI LAMIERE S.P.A.
Via 4 novembre 32
25010 SAN ZENO NAVIGLIO
BS Italy

B06 Marcatura di prodotto / Marking of the product

PRODOTTO/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PRODUCT/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355J2+N
Normativa / Specification	EN 10025-2:2019

B07 ITEM	B07 IDENTIFICATIVO PRODOTTO PRODUCT ID	B16 COLATA HEAT	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 PESO TEORICO [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	TEMPERATURA FINE °C END TEMPERATURE	C00 N° CICLI / CYCLES	C00 CAMPIONE SAMPLE Q+T	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURA (T) °C TEMPERATURE	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
7	2023/39985A	A35/322009	20.00X2450X12000	4,62	81718	BO	N*	[ZH399]																	
7	2023/39990A	A35/331243	20.00X2450X12000	4,62	81875	BO	N*	[ZH604]																	

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07 COLATA HEAT	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Cu %	C77 Ni %	C78 Cr %	C79 Mo %	C80 Al %	C81 V %	C82 Nb %	C83 Ti %	C84 Sn %	C85 Ca %	C86 N %	C87 B %	C88 H %	C89 Ceq1 % (D)	C90 Ceq2 % (D)	C91 Pcm % (D)
S355J2+N Min																					
S355J2+N Max	0,20	1,60	0,55	0,025	0,025	0,550															
A35/322009	0,17	1,35	0,030	0,013	0,015	0,020	0,010	0,020		0,070	0,062	0,002	0,002	0,002		0,0050	0,0002		0,40	0,41	0,25
A35/331243	0,19	1,60	0,21	0,014	0,010	0,020	0,010	0,020		0,059	0,003	0,003	0,002	0,002		0,0080	0,0002		0,46	0,46	0,28

C00 CAMPIONE SAMPLE		C01 SPESSORE PRODOTTO PRODUCT THICKNESS	C01 POSIZIONE (1) LOCATION	C01 POSIZIONE (2) LOCATION	C02 DIREZIONE (3) ORIENTATION	C03 TEMPERATURA [°C] TEST TEMPERATURE	PROVA DI TRAZIONE TENSILE TEST C11 ReH [Mpa] YIELD STRENGTH	C12 Rm [Mpa] TENSILE STRENGTH	C12 ReH/Rm	C13 A% ELONGATION	C14 Rp 0,2 [Mpa] PROOF STRENGTH	C10 FORMA PROVINO (4) SHAPE OF TEST PIECE	PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST C41 LARGHEZZA [mm] WIDTH	C02 DIREZIONE (3) ORIENTATION	C03 TEMPERATURA [°C] TEST TEMPERATURE	C01 POSIZIONE (2) LOCATION	C42 [J] INDIVIDUAL VALUES	C43 MEDIA [J] MEAN VALUE	PROVA DI PIEGA BEND TEST C02 DIREZIONE (3) ORIENTATION	C51 MANDRINO [mm] MANDREL	C52 ANGOLO [°] ANGLE	C50 ESITO (5) RESULT	PROVA DI DUREZZA HARDNESS TEST C01 POSIZIONE (2) LOCATION	C30 METODO TEST METHOD	C31 SINGOLI VALORI INDIVIDUAL VALUES	C32 MEDIA MEAN VALUE	PROVA DI STRIZIONE Z% TEST C53 Z% INDIVIDUAL VALUES	C53 Z% SINGOLI VALORI Z% MEAN VALUE	C54 Z% VALORE MEDIO
S355J2+N Min 16.10 - 40.00														L	-20		27	0											
S355J2+N Min 16.10 - 40.00						20	345	470		20																			
S355J2+N Max 16.10 - 40.00						20	630	630																					
ZH399		18,00	2	P	T	20	374	530	0,71	30		P	10,00	L	-20	P	29 28 32	30											
ZH604		20,00	2	P	T	20	464	542	0,86	31		P	10,00	L	-20	P	159 212 157	176											

C10
UNI EN ISO 6892-1:2009/ UNI EN ISO 148-1:2011

Z01						
ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
7		EN 10029 CL.A -0.6 +1 MM	-0+100 MM -0 +100 MM	-0+200 MM -0 +200 MM	EN 10163/2:2004 CL A1	EN 10029:2010 CL. N

CERTIFICHIAMO che i prodotti elencati sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned products are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE I PRODOTTI SONO STATI CONTROLLATI IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PRODUCTS WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06		
Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE	Ferriera VALSIDER S.p.A. CONTROLLO QUALITÀ Spreafico Roberto

Z04	
CE 0948	**Prodotti conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0015 emesso da TÜV Italia srl .** **Products in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0015 from TÜV Italia srl.**

AZIENDA CON
SISTEMA DI GESTIONE
CERTIFICATO DA DNV
ISO 9001 - ISO 14001
ISO 45001

METINVEST
FERRIERA VALSIDER SPA

Ferrirera Valsider SPA
Via Antonio Salieri, 36
37050 Vallese di Oppeano VR, Italy
Phone +39 045 7133311
Fax +39 39 045 7133394
http://valsider.metinvestholding.com

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
Ferriera Valsider spa
Via Antonio Salieri , 36 - 37050 - vallese di Oppeano (VR)
nello stabilimento produttivo di:
Via Antonio Salieri , 36 - 37050 - vallese di Oppeano (VR)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned, Roberto Re, ,representing the manufacturer:

Ferriera Valsider spa
Via Antonio Salieri , 36 - 37050 - vallese di Oppeano (VR)
the production site:
Via Antonio Salieri , 36 - 37050 - vallese di Oppeano (VR)
Hereby declares that the products: Hot-rolled flat products of steel according to EN10025-1: 2004.
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2C+N+Z25	EN 10025-2:2019
S355JR+AR	EN 10025-2:2019
S355JR+N	EN 10025-2:2019
S355K2+AR	EN 10025-2:2019
S355K2+N	EN 10025-2:2019
S355K2+N+Z15	EN 10025-2:2019
S355K2+N+Z25	EN 10025-2:2019
S355K2+N+Z35	EN 10025-2:2019
S355K2C+N	EN 10025-2:2019
S355J0+AR	EN 10025-2:2019
S355J0+AR+Z25	EN 10025-2:2019
S355J0+N	EN 10025-2:2019
S355J0+N+Z35	EN 10025-2:2019
S355J0C+AR	EN 10025-2:2019
S355J0C+N	EN 10025-2:2019
S355J2+AR	EN 10025-2:2019
S355J2+N	EN 10025-2:2019
S355J2+N+Z15	EN 10025-2:2019
S355J2+N+Z25	EN 10025-2:2019
S355J2+N+Z35	EN 10025-2:2019
S355J2C+N	EN 10025-2:2019
S355JRC+N	EN 10025-2:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/Plate	S355J2+N	2023/39985A	2339985	EN10025-1:2004
Lamiera/Plate	S355J2+N	2023/39990A	2339990	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document are intended to be used in metal structures or mixed metal and concrete structures.

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	Prestazione / Performance	Norma Armonizzata / Harmonized specification
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TÜV Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0015

It also states that the notified body, TÜV Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0015

CE
0948

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0015 emesso da TÜV Italia srl . Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0015 from TÜV Italia srl.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

Vallese di Oppeano,

13/12/2023

Roberto Re

Managing Director
Ferriera Valsider s.p.a.
Metinvest Group

939/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002082	123A40D	Q012301661

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7776 del 13/12/2023__230266__237961-01

注意とお願い：本証明書の改ざんや不正使用は、固くお断りしております。本証明書の真偽についてご質問がある場合は、次の当社窓口までお問い合わせ下さい。
Notice : Modification to or unauthorized use of this certificate is strictly prohibited. If you have any questions on the authenticity of this certificate, you can contact us by E-mail. mc-pi@jp.nipponsteel.com

日本製鉄株式会社
NIPPON STEEL CORPORATION

鋼材検査証明書
INSPECTION CERTIFICATE

CE 0035 09 EN10025-1

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

本　　社：〒100-8071 東京都千代田区丸の内二丁目6番1号
HEAD OFFICE : 2-6-1, MARUNOUCHI, CHIYODA-KU, TOKYO, 100-8071, JAPAN
九州製鉄所 大分：〒870-0992 大分県大分市大字西ノ洲1番地
KYUSHU WORKS OITA : 1, NISHINOSU, OITA-CITY, OITA-PREF., 870-0992, JAPAN

注　文　者：5572 -BGCW014
SHIPPER
契約番号：2-831-HI-5-4-0S05　船番：
CONTRACT No.　SHIP No.
商　品　名：HOT ROLLED STEEL PLATES
COMMODITY
規　　格：EN10025-2 (2004) S355J2+N EN10029(2010)
SPECIFICATION
需　要　家：FRANCHINI LAMIERE S.P.A.　需要家管理番号：　文書番号：
CUSTOMER　CUSTOMER'S CONTROL No.　DOCUMENT No.

証明書番号：Y. E2200088　頁：PAGE 15
CERTIFICATE No.
発行年月日：2022-04-14
DATE OF ISSUE

需要家照合番号 ORDER ITEM No. / 寸法 DIMENSION mm, "inch, ': feet	員数 QUANTITY	質量 MASS KG	製鋼番号 HEAT No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST 降伏点・耐力 YP, YS MPA	引張強さ TS MPA	伸び EL %	衝撃試験 IMPACT TEST 試験温度 TEST TEMP.	吸収エネルギー ABSORBED ENERGY KV2 J 1	2	3	AVG	化学成分 CHEMICAL COMPOSITION % C 2	Si 2	Mn 2	P 3	S 3	Cu 2	Ni 2	Cr 2	Mo 2	Nb 2	V 2	Ti 2	Sol. Al	Pcm	CEV	熱処理状態 注13
08 15.0X2500X12000	1	3534	ZR2170 29297	237959-03	478	574	26	-20 C	157	196	164	172	L 16	22	1 124	12	4	2	25 2	2	0	2 2	03	37	N	A
08 15.0X2500X12000	1	3534	ZR2170 29297	237959-04	478	574	26	-20 C	157	196	164	172	L 16	22	1 124	12	4	2	25 2	2	0	2 2	03	37	N	A
08 15.0X2500X12000	1	3534	ZR2170 29297	237959-05	478	574	26	-20 C	157	196	164	172	L 16	22	1 124	12	4	2	25 2	2	0	2 2	03	37	N	A
08 15.0X2500X12000	1	3534	ZR2171 29309	237960-03	460	562	33	-20 C	215	171	188	191	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237961-01	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29309	237961-04	460	562	33	-20 C	215	171	188	191	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29309	237961-05	460	562	33	-20 C	215	171	188	191	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237962-01	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237962-02	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237962-05	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237963-03	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A
08 15.0X2500X12000	1	3534	ZR2171 29308	237963-04	472	569	26	-20 C	166	192	190	183	L 16	22	1 126	13	3	1	26 2	2	0	2 2	03	38	N	A

注釈 NOTES 注1 試験片熱処理区分 Test piece heat treatment, N：試験片焼ならし処理後 Heat treated for test piece, ブランク blank：供給まま As-supplied 注2 位置 Location T：Top, D：Bottom 注3 方向 Direction, L：圧延方向 Longitudinal, C：直角方向 Transverse, Z：板厚方向 Through Thickness, 45°：方向45Deg. to the Longitudinal Axis
注4 採内位置Position in thickness, F：全厚 Full-thick., S：表層 Surface, I：裏層 Bottom surface, Q：1/4厚Quarter-thick., M：1/2厚Mid-thick., T：1/4厚Third-thick., 3：3/4厚Three quarter-thick., 2：表層下12.5mm 12.5mm-under surface, H：半厚Half-thick. 注5 GL：原点距離Gauge Length, 平行部試片Rectangular type specimen, A：50mm, B：70mm, C：80mm, D：200mm, E：2", F：8", G：5.65√So, H：4√65, 丸棒試験片Round type specimen, 1：20mm2：70mm, 3：2", 4：5.65√So, 5：4√So 注6 YP, YS：Yield Point or Yield Strength, 0.2YS：0.2% Offset, 0.5YS：0.5%total extension under load, LYP：Lower yield point 注7 RA：絞り Reduction of Area, YR：降伏比 Yield Ratio, 注8 A：合格 Acceptable
注9 SIZE記号試験片寸法 F：10mmFull, 2：12.5mmSub, 3：33mmSub, 4：33mmSub, 5：15mmSub, 6：8.07mmSub, 7：7.5mmSub, 8：6.7mmSub, 9：10.0mm, A：Plate Thick. 注10 分析区分Analysis L：ラドル分析 Ladle, P：製品分析 Product 注11 超音波探傷試験 Ultrasonic test A：Acceptable 注12 寸法、外観、形状検査 Dimension, Visual Shape Inspection A：Acceptable
注13 供給状態 Condition of supply N：NORMALIZED 注ISC 温度 Temperature/ C：°C, F：°F, 1Mpa=1N/mm2
FA：圧延破面率(Fracture Appearance(Shear Fracture)), CF：脆性破面率(Crystallinity Fracture, LE：横膨張Lateral Expansion, AGS：オーステナイト粒度Austenite Grain Size, FGS：フェライト粒度 Ferrite Grain Size, SR：Stress Relieved/Post Weld Heat Treatment
All plates are produced by following process, STEEL MAKING : LD Process and Fully-killed practice.

DOP NO.: SW-EN-PLATE-TUV

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.
DURABILITY : NO PERFORMANCE DETERMINED
REGULATED SUBSTANCE : NO PERFORMANCE DETERMINED
INTENDED USES : METAL STRUCTURES OR IN COMPOSITE METAL AND CONCRETE STRUCTURE

NS. N. MATRICOLA 230266

K. Nishijima
西島　克志　KATSUSHI NISHIJIMA
九州製鉄所　品質保証室長
HEAD OF DEPARTMENT
QUALITY ASSURANCE DEPT.
KYUSHU WORKS

IM N0000ADFQ1 1E　　111 E 4

BUREAU VERITAS
Certification

CE

COPY
20 005
Duplication is prohibited without our permission

CONFORMITY CERTIFICATE OF FACTORY PRODUCTION CONTROL

Certificate number: **1035-CPR-ES065538**

In compliance of the Regulation No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products, it has been stated that the product:

HOT ROLLED PRODUCTS OF STRUCTURAL STEELS

Manufactured by:	**NIPPON STEEL CORPORATION - KYUSYU WORKS OITA AREA**
Business address:	OAZA NISHINOSU 1. OITA CITY. JAPAN
In the factory:	OAZA NISHINOSU 1. OITA CITY. JAPAN

They are submitted by the manufacturer to the initial type testing of the product and a factory production control, and that the notified body Bureau Veritas Certification has performed the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control established in the harmonized standard concerned.
This certificate attests that all provisions concerning the attestation of factory production control described in the Annex ZA of the harmonized standard concerned, and it authorizes the manufacturer or its agent to fix the CE marking.

This certificate remains valid as long as the conditions laid down in the harmonised standard concerned or the manufacturing conditions in the factory or the FPC itself are not modified significantly.

Initial date of issue: **August 08th, 2012**
Date of update: **March 17th, 2020**
Expiration date: **August 07th, 2021**

ENAC
CERTIFICACIÓN
Nº 18/C-PR045

BUREAU VERITAS

Bureau Veritas Iberia, S.L., Edificio Caoba. C/ Valportillo Primera 22-24 Polígono Industrial La Granja
28108 Alcobendas (MADRID). Notified Body 1035

에빈글로벌3그룹2021-04-21 14:30:11

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BUREAU VERITAS Certification

CE

ANNEX TO THE CERTIFICATE NUMBER 1035-CPR-ES065538

COPY

Date: March 17th, 2020

Product:	Hot rolled products of structural steels			
Standard:	EN 10025-1: 2004 Hot rolled products of structural steels-Part 1: General technical delivery conditions			
Type and Grade	**Standar**	**Section**	**Thickness**	**Factory**
S275 JR + AR S275 J0 + AR S355 JR + AR S355 J0 + AR	EN 10025-2:2004 Hot rolled product of structural steel. Part 2. Technical delivery conditions for non- alloy structural steel	Flat products (COIL)	6 mm to 25.4 mm	HOT STRIP MILL
S355 JR + AR S355 J0 + AR S355 JR + N S355 J0 + N S355 J2 + N S355 K2 + N		Flat products (PLATES)	6 mm to 100 mm	PLATE MILL
S355 M S355 ML	EN 10025-4:2004 Hot rolled product of structural steel. Part 4. Technical delivery conditions for thermomechanical rolled weldable fine grain structural steel	Flat products (PLATES)	6 mm to 100 mm	PLATE MILL

ENAC CERTIFICACIÓN
Nº 18/C-PR045

BUREAU VERITAS

Bureau Veritas Iberia, S.L., Edificio Caoba. C/ Valportillo Primera 22-24 Polígono Industrial La Granja
28108 Alcobendas (MADRID). Notified Body 1035

에빈글로벌3그룹2021-04-21 14:30:11

14380010171618982902

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723002143	123A90A	Q012301756

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 25.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60950

Mill Test Certificate Nr X 4797687

Delivery note number 4797687 from 22 February 2023 A03

A08 Our reference : 1100665940

A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	21.600 mm	10,944 to	60948	5,472 to		1
				60950	5,472 to		1
000002	HE 800 B	24.100 mm	18,315 to	60950	18,315 to		3

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
60948	0,06	0,92	0,020	0,024	0,19	0,011	0,001	0,28	0,18	0,12	0,029	0,009	0,050	0,001	0,0001	0,28
60950	0,06	0,90	0,019	0,023	0,16	0,009	0,003	0,31	0,18	0,09	0,032	0,008	0,050	0,001	0,0004	0,28

B07 Heat nr	Tensile test N/mm2 ReH C11	Tensile test N/mm2 Rm C12	Tensile test 5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
60948	463	561	25,11	FL.1/3	L		-20	178	158	146	161
60950	467	540	24,02	FL.1/3	L		-20	163	159	152	158

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
945/ 3402

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4797687

Delivery note number 4797687 from 22 February 2023 A03

A08 Our reference : 1100665940

A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
946/ 3402

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400443
PLACCA/COLATA: 65293

Mill Test Certificate Nr X 4954815

Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000014	HE 800 A	20.100 mm	8,840 to	65294	8,840 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					0,14												0,020
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
65294		0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27	0,023

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
65294		462	557	25,39	FL.1/3	L		-20	164	167	151	161

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4954815

Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4954815
Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02
Inspection certificate according to EN 10204:2004 / 3.1

A02

A06

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000019	HE 800 B	18.100 mm	13,965 to	65293	13,965 to		3
000020	HE 800 B	24.100 mm	12,398 to	65294	12,398 to		2

Heat nr	Heat analysis (%)															
B07	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
65293	0,06	0,91	0,021	0,023	0,19	0,009	0,004	0,29	0,12	0,11	0,030	0,007	0,030	0,001	0,0005	0,27
65294	0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27

Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED			J		
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
65293	447	538	25,18	FL.1/3	L		-20	137	109	158	135
65294	452	538	26,34	FL.1/3	L		-20	138	143	189	157

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4954815
Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000447038-PO 1723002143-0000400443

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000447038
production code

ordine cliente: — PO 1723002143
customer order:

documento di trasporto: — DDT 0000400443
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

25/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI – COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447039
RIF. ORDINE: PO 17230021413
DDT: 0000460443
PLACCA/COLATA: 44724

Mill Test Certificate NrX 4683116

Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404
A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000013	HE 800 A	20.100 mm	8,924 to	44729	4,462 to		1
				44730	4,462 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
44729		0,07	0,69	0,018	0,022	0,19	0,011	0,004	0,27	0,17	0,13	0,034	0,002	0,050	0,001	0,0002	0,26
44730		0,06	0,72	0,022	0,017	0,18	0,011	0,004	0,31	0,17	0,17	0,035	0,002	0,050	0,001	0,0002	0,26

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
44729		444	535	25,65	FL.1/3	L		-20	177	178	174	176
44730		447	542	24,88	FL.1/3	L		-20	189	171	189	183

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4683116

Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404

A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
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Site de Differdange
L-4503 Differdange

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Service Gestion Qualité
66, rue de Luxembourg
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ArcelorMittal

A05
Mill Test Certificate Nr X 4683116
Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404
A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000019	HE 800 B	18.100 mm	4,700 to	44723	4,700 to		1
000021	HE 800 B	24.100 mm	6,258 to	44724	6,258 to		1

Heat analysis (%)

Heat nr B07	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
44723	0,06	0,69	0,014	0,021	0,18	0,012	0,004	0,21	0,15	0,08	0,034	0,002	0,050	0,001	0,0002	0,23
44724	0,07	0,73	0,013	0,022	0,17	0,011	0,003	0,23	0,16	0,09	0,037	0,002	0,060	0,001	0,0002	0,26

Heat nr	Tensile test			Charpy impact test						
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J		
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
44723	411	518	26,57	FL.1/3	L		-20	184	193	190	189
44724	431	517	27,69	FL.1/3	L		-20	176	186	191	184

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 4683116
Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404
A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447068
RIF. ORDINE: FO 1723002143
DDT: 0000400443
PLACCA/COLATA: 65294

Mill Test Certificate Nr X 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000015	HE 800 A	24.100 mm	16,182 to	65294	16,182 to		3

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
65294	0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27	0,023

B07 Heat nr	Tensile test			Charpy impact test							
	N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C02	UNAGED °C C41	C03	J 1 C42	2	3	M C43
Min	345	470	22,00	FL.1/3	L		-20		19			27
Max		630										
65294	462	557	25,39	FL.1/3	L		-20	164	167	151		161

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4955638
Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000008	HE 800 M	18.100 mm	5,732 to	65295	5,732 to		1
000019	HE 800 B	18.100 mm	9,476 to	65293	4,738 to		1
				65294	4,738 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
65293		0,06	0,91	0,021	0,023	0,19	0,009	0,004	0,29	0,12	0,11	0,030	0,007	0,030	0,001	0,0005	0,27
65294		0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27
65295		0,06	0,87	0,018	0,025	0,20	0,008	0,004	0,22	0,15	0,13	0,030	0,007	0,050	0,001	0,0005	0,27

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
65293		447	538	25,18	FL.1/3	L		-20	137	109	158	135
65294		452	538	26,34	FL.1/3	L		-20	138	143	189	157
65295		451	544	22,16	FL.1/3	L		-20	62	82	97	80

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI – COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447068
RIF. ORDINE: PO 17230021A3
DDT: 0000430443
PLACCA/COLATA: 62431

Mill Test Certificate Nr X 4853911

Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	18.800 mm	19,480 to	62430	9,740 to		2
				62431	9,740 to		2

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
62430	0,07	0,88	0,022	0,015	0,21	0,009	0,005	0,31	0,15	0,12	0,032	0,007	0,040	0,001	0,0004	0,29
62431	0,06	0,85	0,022	0,015	0,19	0,010	0,004	0,32	0,17	0,12	0,033	0,008	0,050	0,001	0,0004	0,28

Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV			UNAGED			J	
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
62430	448	526	23,00	FL.1/3	L		-20	123	74	81	93
62431	466	547	24,62	FL.1/3	L		-20	157	157	180	165

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4853911
Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447008
RIF. ORDINE: PO 1723002143
DDT: 0000400443
PIACCA/COLATA: 62430

Mill Test Certificate Nr X 4853911

Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	18.800 mm	19,480 to	62430	9,740 to		2
				62431	9,740 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
62430		0,07	0,88	0,022	0,015	0,21	0,009	0,005	0,31	0,15	0,12	0,032	0,007	0,040	0,001	0,0004	0,29
62431		0,06	0,85	0,022	0,015	0,19	0,010	0,004	0,32	0,17	0,12	0,033	0,008	0,050	0,001	0,0004	0,28

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
62430		448	526	23,00	FL.1/3	L		-20	123	74	81	93
62431		466	547	24,62	FL.1/3	L		-20	157	157	180	165

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4853911

Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466

A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723002143	123A90A	Q012301758

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 25.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000447038-PO 1723002143-0000400481

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000447038

ordine cliente:
customer order: PO 1723002143

documento di trasporto:
document of trasport DDT 0000400481

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

25/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400481
PLACCA/COLATA: 65294

Mill Test Certificate NrX 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000015	HE 800 A	24.100 mm	16,182 to	65294	16,182 to		3

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
65294	0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27	0,023

B07 Heat nr	Tensile test			Charpy impact test							
	N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C41	UNAGED °C C03	1 C42	2	3	J M C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
65294	462	557	25,39	FL.1/3	L		-20	164	167	151	161

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
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L-4009 Esch/Alzette
ArcelorMittal

A05
Mill Test Certificate NrX 4955638
Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

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S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000008	HE 800 M	18.100 mm	5,732 to	65295	5,732 to		1
000019	HE 800 B	18.100 mm	9,476 to	65293	4,738 to		1
				65294	4,738 to		1

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
65293	0,06	0,91	0,021	0,023	0,19	0,009	0,004	0,29	0,12	0,11	0,030	0,007	0,030	0,001	0,0005	0,27
65294	0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27
65295	0,06	0,87	0,018	0,025	0,20	0,008	0,004	0,22	0,15	0,13	0,030	0,007	0,050	0,001	0,0005	0,27

Heat nr	Tensile test			Charpy impact test						
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J		
	ReH	Rm	A(%)	Position	mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41 C03	C42			C43
Min	345	470	22,00	FL.1/3	L	-20		19		27
Max		630								
65293	447	538	25,18	FL.1/3	L	-20	137	109	158	135
65294	452	538	26,34	FL.1/3	L	-20	138	143	189	157
65295	451	544	22,16	FL.1/3	L	-20	62	82	97	80

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4955638

Delivery note number 4955638 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400481
PLACCA/COLATA: 44724

Mill Test Certificate NrX 4683116

Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404
A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000013	HE 800 A	20.100 mm	8,924 to	44729	4,462 to		1
				44730	4,462 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
44729		0,07	0,69	0,018	0,022	0,19	0,011	0,004	0,27	0,17	0,13	0,034	0,002	0,050	0,001	0,0002	0,26
44730		0,06	0,72	0,022	0,017	0,18	0,011	0,004	0,31	0,17	0,17	0,035	0,002	0,050	0,001	0,0002	0,26

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
44729		444	535	25,65	FL.1/3	L		-20	177	178	174	176
44730		447	542	24,88	FL.1/3	L		-20	189	171	189	183

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4683116

Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404

A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4683116
Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404
A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000019	HE 800 B	18.100 mm	4,700 to	44723	4,700 to		1
000021	HE 800 B	24.100 mm	6,258 to	44724	6,258 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					**0,14**											
	Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
44723		0,06	0,69	0,014	0,021	0,18	0,012	0,004	0,21	0,15	0,08	0,034	0,002	0,050	0,001	0,0002	0,23
44724		0,07	0,73	0,013	0,022	0,17	0,011	0,003	0,23	0,16	0,09	0,037	0,002	0,060	0,001	0,0002	0,26

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	UNAGED mm C41	°C C03	J 1 C42	2	3	M C43
B07												
	Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
	Max		**630**									
44723		411	518	26,57	FL.1/3	L		-20	184	193	190	189
44724		431	517	27,69	FL.1/3	L		-20	176	186	191	184

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal
A05

Mill Test Certificate NrX 4683116

Delivery note number 4683116 from 30 August 2022 A03

A08 Our reference : 1100652404

A07 Your reference : OSC2280280
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
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Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400481
PLACCA/COLATA: 65351

Mill Test Certificate Nr X 4954884

Delivery note number 4954884 from 30 September 2023 A03

A08 Our reference : 1100679511
A07 Your reference : OSC2380337
02.08.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000010	HE 800 B	18.100 mm	9,558 to	65351	9,558 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
65351		0,07	0,85	0,021	0,019	0,19	0,009	0,004	0,32	0,17	0,13	0,030	0,008	0,050	0,001	0,0004	0,29

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
65351		449	536	24,49	FL.1/3	L		-20	147	156	166	156

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4954884

Delivery note number 4954884 from 30 September 2023 A03

A08 Our reference : 1100679511

A07 Your reference : OSC2380337
02.08.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
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Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
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L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400481
PLACCA/COLATA: 62431

Mill Test Certificate NrX 4853911

Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	18.800 mm	19,480 to	62430	9,740 to		2
				62431	9,740 to		2

B07 Heat nr		Heat analysis (%)														
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
62430		0,07	0,88	0,022	0,015	0,21	0,009	0,005	0,31	0,15	0,12	0,032	0,007	0,040	0,001	0,0004	0,29
62431		0,06	0,85	0,022	0,015	0,19	0,010	0,004	0,32	0,17	0,12	0,033	0,008	0,050	0,001	0,0004	0,28

B07 Heat nr		Tensile test			Charpy impact test							
		N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C02	UNAGED °C C41	C03	J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19			27
	Max		630										
62430		448	526	23,00	FL.1/3	L		-20	123	74	81		93
62431		466	547	24,62	FL.1/3	L		-20	157	157	180		165

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4853911
Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400481
PLACCA/COLATA: 62430

Mill Test Certificate Nr X 4853911

Delivery note number 4853911 from 8 May 2023 A03

A05

A08 Our reference : 1100671466

A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	18.800 mm	19,480 to	62430	9,740 to		2
				62431	9,740 to		2

B07 Heat nr	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
62430	0,07	0,88	0,022	0,015	0,21	0,009	0,005	0,31	0,15	0,12	0,032	0,007	0,040	0,001	0,0004	0,29
62431	0,06	0,85	0,022	0,015	0,19	0,010	0,004	0,32	0,17	0,12	0,033	0,008	0,050	0,001	0,0004	0,28

B07 Heat nr	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED C42	J 2	3	M C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
62430	448	526	23,00	FL.1/3	L		-20	123	74	81	93
62431	466	547	24,62	FL.1/3	L		-20	157	157	180	165

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4853911
Delivery note number 4853911 from 8 May 2023 A03

A08 Our reference : 1100671466
A07 Your reference : OSC2380181
13.04.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723002143	123A90A	Q012301753

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **24.01.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723662143
DDT: 0000400415
PLACCA/COLATA: 60899

Mill Test Certificate Nr X 4820090

Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737
A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000009	HE 800 A	24.100 mm	5,320 to	60900	5,320 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
60900		0,08	1,08	0,020	0,004	0,20	0,009	0,017	0,21	0,13	0,12	0,019	0,002	0,040	0,001	0,0004	0,32

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
B07												
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
60900		462	552	26,98	FL.1/3	L		-20	185	120	144	150

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4820090

Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737

A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

984//3402

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate Nr X 4820090

Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737

A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000012	HE 800 B	18.100 mm	4,673 to	60899	4,673 to		1
000013	HE 800 B	20.100 mm	5,189 to	61386	5,189 to		1

Heat analysis (%)

Heat nr B07	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
60899	0,08	1,09	0,017	0,002	0,22	0,008	0,013	0,21	0,12	0,09	0,018	0,002	0,040	0,001	0,0004	0,31
61386	0,08	1,36	0,025	0,019	0,19	0,011	0,003	0,33	0,16	0,11	0,038	0,007	0,040	0,001	0,0005	0,38

Heat nr	Tensile test			Charpy impact test						
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J		
	ReH	Rm	A(%)	Position	mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42		C43
Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**	**27**
Max		**630**								
60899	460	562	28,09	FL.1/3	L		-20	192	233	210	212
61386	405	517	28,01	FL.1/3	L		-20	138	144	157	146

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4820090

Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737

A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100667737
A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60899

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

Mill Test Certificate NrX 4820090

Delivery note number 4820090 from 23 March 2023

A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000009	HE 800 A	24.100 mm	5,320 to	60900	5,320 to		1

B07 Heat nr		Heat analysis (%)														
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
60900		0,08	1,08	0,020	0,004	0,20	0,009	0,017	0,21	0,13	0,12	0,019	0,002	0,040	0,001	0,0004	0,32

B07 Heat nr		Tensile test			Charpy impact test							
		N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
60900		462	552	26,98	FL.1/3	L		-20	185	120	144	150

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100667737

A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4820090

Delivery note number 4820090 from 23 March 2023

A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4820090
Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737
A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02
Inspection certificate according to EN 10204:2004 / 3.1

A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000012	HE 800 B	18.100 mm	4,673 to	60899	4,673 to		1
000013	HE 800 B	20.100 mm	5,189 to	61386	5,189 to		1

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
60899	0,08	1,09	0,017	0,002	0,22	0,008	0,013	0,21	0,12	0,09	0,018	0,002	0,040	0,001	0,0004	0,31
61386	0,08	1,36	0,025	0,019	0,19	0,011	0,003	0,33	0,16	0,11	0,038	0,007	0,040	0,001	0,0005	0,38

Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J			
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
60899	460	562	28,09	FL.1/3	L		-20	192	233	210	212
61386	405	517	28,01	FL.1/3	L		-20	138	144	157	146

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4820090

Delivery note number 4820090 from 23 March 2023 A03

A08 Our reference : 1100667737

A07 Your reference : OSC2380106
24.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000447038-PO 1723002143-0000400418

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000447038

ordine cliente:
customer order: PO 1723002143

documento di trasporto:
document of trasport DDT 0000400418

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

24/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 045 6339400 | F. +39 045 6339435
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T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60899

Mill Test Certificate NrX 4821081

Delivery note number 4821081 from 24 March 2023 A03

A08 Our reference : 1100668742
A07 Your reference : OSC2370122
07.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	16.200 mm	4,184 to	60899	4,184 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
60899		0,08	1,09	0,017	0,002	0,22	0,008	0,013	0,21	0,12	0,09	0,018	0,002	0,040	0,001	0,0004	0,31

Heat nr		Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	Charpy impact test C40 KV UNAGED J Position	mm	°C	1	2	3	M
B07		C11	C12	C13	C01	C02	C41 C03	C42			C43
	Min	345	470	22,00	FL.1/3	L	-20		19		27
	Max		630								
60899		460	562	28,09	FL.1/3	L	-20	192	233	210	212

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4821081

Delivery note number 4821081 from 24 March 2023 A03

A08 Our reference : 1100668742

A07 Your reference : OSC2370122
07.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60952

Mill Test Certificate NrX 4800839

Delivery note number 4800839 from 25 February 2023 A03

A08 Our reference : 1100662638
A07 Your reference : OSC2280518
15.12.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 800 A	18.100 mm	4,032 to	60313	4,032 to		1

B07 Heat nr		Heat analysis (%)														
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
60313		0,07	0,70	0,016	0,012	0,20	0,011	0,004	0,30	0,15	0,12	0,034	0,001	0,040	0,001	0,0004	0,26

B07 Heat nr		Tensile test			Charpy impact test							
		N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01	C02	mm C41	UNAGED °C C03	1 C42	2	3	J M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
60313		484	576	23,42	FL.1/3	L		-20	111	128	140	126

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04 CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4800839
Delivery note number 4800839 from 25 February 2023 A03

A08 Our reference : 1100662638
A07 Your reference : OSC2280518
15.12.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

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66, rue de Luxembourg
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ArcelorMittal

A05
Mill Test Certificate NrX 4800839
Delivery note number 4800839 from 25 February 2023

A03

A08 Our reference : 1100662638
A07 Your reference : OSC2280518
15.12.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02
Inspection certificate according to EN 10204:2004 / 3.1

A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000003	HE 800 B	18.100 mm	9,432 to	60950	4,716 to		1
				60952	4,716 to		1

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
60950	0,06	0,90	0,019	0,023	0,16	0,009	0,003	0,31	0,18	0,09	0,032	0,008	0,050	0,001	0,0004	0,28
60952	0,08	0,97	0,020	0,020	0,18	0,009	0,004	0,35	0,17	0,10	0,033	0,008	0,050	0,001	0,0004	0,31

Heat nr	Tensile test			Charpy impact test						
	N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	C40 KV Position		mm	UNAGED °C	J 1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
60950	467	540	24,02	FL.1/3	L		-20	163	159	152	158
60950	469	547	25,76	FL.1/3	L		-20	144	161	175	160
60952	416	504	27,48	FL.1/3	L		-20	189	146	144	160

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4800839

Delivery note number 4800839 from 25 February 2023 A03

A08 Our reference : 1100662638
A07 Your reference : OSC2280518
15.12.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
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Italy Srl
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I-10043 ORBASSANO TO

A01 **Plant:**
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Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60950

Mill Test Certificate Nr X 4805269

Delivery note number 4805269 from 2 March 2023 A03

A08 Our reference : 1100665940
A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 800 B	24.100 mm	6,242 to	60950	6,242 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
60950		0,06	0,90	0,019	0,023	0,16	0,009	0,003	0,31	0,18	0,09	0,032	0,008	0,050	0,001	0,0004	0,28

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	mm C02	°C C41	1 C03	2 C42	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20	19		27
	Max		630								
60950		469	547	25,76	FL.1/3	L		-20	158	179	180	172

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

999/3402

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4805269
Delivery note number 4805269 from 2 March 2023 A03

A08 Our reference : 1100665940
A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

1000/3402

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 65293

Mill Test Certificate Nr X 4954815

Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000014	HE 800 A	20.100 mm	8,840 to	65294	8,840 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					0,14												0,020
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
65294		0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27	0,023

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	mm C02	°C C41	1 C03	2 C42	3	M C43
B07											
	Min	345	470	22,00	FL.1/3	L		-20	19		27
	Max		630								
65294		462	557	25,39	FL.1/3	L		-20	164	167	151	161

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4954815
Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

1002/3402

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 4954815
Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367
A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000019	HE 800 B	18.100 mm	13,965 to	65293	13,965 to		3
000020	HE 800 B	24.100 mm	12,398 to	65294	12,398 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
65293		0,06	0,91	0,021	0,023	0,19	0,009	0,004	0,29	0,12	0,11	0,030	0,007	0,030	0,001	0,0005	0,27
65294		0,07	0,84	0,018	0,023	0,19	0,012	0,004	0,22	0,14	0,10	0,030	0,007	0,040	0,001	0,0005	0,27

Heat nr		Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	Charpy impact test C40 KV Position	mm	UNAGED °C	J 1	2	3	M
B07		C11	C12	C13	C01	C02	C41 C03	C42			C43
	Min	345	470	22,00	FL.1/3	L	-20	19			27
	Max		630								
65293		447	538	25,18	FL.1/3	L	-20	137	109	158	135
65294		452	538	26,34	FL.1/3	L	-20	138	143	189	157

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4954815

Delivery note number 4954815 from 30 September 2023 A03

A08 Our reference : 1100678367

A07 Your reference : OSC2380316
17.07.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
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43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000447038
RIF. ORDINE: PO 1723002143
DDT: 0000400418
PLACCA/COLATA: 60950

Mill Test Certificate NrX 4797687

Delivery note number 4797687 from 22 February 2023 A03

A08 Our reference : 1100665940
A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	Product (B01)	Length	Weight (B13)	Heat nr (B07)	Weight	Bund.	Bars (B08)
000001	HE 800 B	21.600 mm	10,944 to	60948	5,472 to		1
				60950	5,472 to		1
000002	HE 800 B	24.100 mm	18,315 to	60950	18,315 to		3

Heat nr (B07)		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
60948		0,06	0,92	0,020	0,024	0,19	0,011	0,001	0,28	0,18	0,12	0,029	0,009	0,050	0,001	0,0001	0,28
60950		0,06	0,90	0,019	0,023	0,16	0,009	0,003	0,31	0,18	0,09	0,032	0,008	0,050	0,001	0,0004	0,28

Heat nr (B07)		Tensile test N/mm2 ReH (C11)	N/mm2 Rm (C12)	5,65VS A(%) (C13)	Charpy impact test C40 KV Position (C01)	(C02)	UNAGED mm (C41)	°C (C03)	J 1 (C42)	2	3	M (C43)
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
60948		463	561	25,11	FL.1/3	L		-20	178	158	146	161
60950		467	540	24,02	FL.1/3	L		-20	163	159	152	158

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4797687
Delivery note number 4797687 from 22 February 2023 A03

A08 Our reference : 1100665940
A07 Your reference : OSC2380048
02.02.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002208	123A40D	Q012301880

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

22.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 180/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/1/1** **131467,131468**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to ASME B16.25 fig.3.A. Normalized 900°C/51'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	(B09) **20" x 1,000" (508 x 25,40 mm) 5 - 7 m**	(B02) **X52N/L360N/6 P355NL1+N**	(B07) **898773**	(B08) **6**	(B15) **39,45**	(B13) **11757**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,15	1,23	0,21	0,007	0,003	0,07	0,08	0,13
product analysis	0,17	1,23	0,22	0,007	0,004	0,07	0,08	0,13
product analysis	0,17	1,24	0,22	0,007	0,004	0,07	0,08	0,13
(B07) **898773**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,030	0,007	0,001	0,001	0,40	
product analysis	0,04	0,05	0,030	0,009	0,001	0,001	0,42	
product analysis	0,04	0,05	0,030	0,008	0,001	0,001	0,42	

Approved by QUALITY2 on 09/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 898773/835 898773/836 Longitudinal	370 395	533 534	34,8 35,0		Mixed area 149 - 159 - 123	144	151 152	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 650	A5 % min 22,0					
898773/836 Longitudinal	382	544	33,0		131 - 122 - 136	130		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ

(D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

835,836,837,838,839,840

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufactur Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego- Le représentant d` acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
KJ 21/632			
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż		dn. 08.02. 2024 r. 180/2024/TUV Strona Page Page Seite Страница 2/2

Approved by QUALITY2 on 09/04/24

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ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 32/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/2/1** **130694,130695**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to ASME B16.25 fig.3.A. Normalized 900°C/52'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 30	(B09) **16" x 1,031" (406,4 x 26,19 mm) 5 - 7,5 m**	(B02) **X52N/L360N/6 P355NL1+N**	(B07) **897612**	(B08) **6**	(B15) **41,92**	(B13) **10364**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,15	1,28	0,22	0,008	0,003	0,09	0,12	0,19
product analysis	0,17	1,28	0,22	0,009	0,005	0,09	0,13	0,19
product analysis	0,17	1,27	0,22	0,008	0,004	0,09	0,13	0,19
(B07) **897612**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,05	0,05	0,036	0,010	0,001	0,001	0,42	
product analysis	0,05	0,05	0,032	0,011	0,001	0,001	0,44	
product analysis	0,05	0,05	0,031	0,011	0,001	0,001	0,44	

Approved by QUALITY2 on 09/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$	Rm	A 2"	Z	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
	acc. to ASTM A370							
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 897612/172 897612/173 Longitudinal	375 339	538 548	39,9 37,8		Mixed area 114 - 140 - 140	131	166 165	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 650	A5 % min 22,0					
897612/173 Longitudinal	415	568	31,2		66 - 80 - 58	68		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.
Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок
174,175,176,177,178,179

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego- Le représentant d` acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
KJ 21/632			
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż		dn. 16.02. 2024 r.

32/2024/TUV

Approved by QUALITY2 on 09/04/24

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alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 642/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/2/1** **135451,135453**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to API-5L. Normalized 910°C/52'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 30.	(B09) **16" x 0,031" (406,4 x 26,19 mm) 5 - 7,5 m**	(B02) **X52N/L360N/6 P355NL1+N**	(B07) **898938**	(B08) **2**	(B15) **14,35**	(B13) **3479**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,14	1,24	0,21	0,008	0,002	0,08	0,08	0,14
product analysis	0,15	1,22	0,21	0,008	0,002	0,07	0,08	0,14
product analysis	0,15	1,22	0,21	0,008	0,002	0,08	0,08	0,14
(B07) **898938**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,030	0,005	0,000	0,001	0,40	
product analysis	0,04	0,05	0,029	0,008	0,000	0,000	0,40	
product analysis	0,04	0,05	0,028	0,008	0,000	0,000	0,40	

Approved by QUALITY2 on 09/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa	Rm MPa	A 2" %	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
	acc. to ASTM A370							
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 898938/2847 898938/2848 Longitudinal	388 372	516 513	36,8 36,8		100% Shear area 256 - 202 - 268	242	150 151	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 650	A5 % min 22,0					
898938/2848 Longitudinal	372	520	34,6		187 - 181 - 185	183		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.

Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

2847, 28448.

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен

Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego- Le représentant d' acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż		dn. 13.03. 2024 r.

KJ 21/632

642/2024/TUV

Approved by QUALITY2 on 09/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002208	123A40D	Q012301827

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **27.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000868** **Rev. N°:** **0** **Date:**

Inspection Date: 14/02/2024

Ref.: 1723002208 123A40D

Our Job n. 324000006

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.			
20000		559X25	Tubi SS CARB. EN 10210 1-2 S355J2H					
				1	7,31	VALCOVNY TRUB	10306	1672/21
			Total:	**1**	**7,31**			
40000		406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	9,82	ARCELORMITTAL ROMAN	72580	B 28684/2
				1	9,86	ARCELORMITTAL ROMAN	72580	B 28684/2
			Total:	**2**	**19,68**			
50000		355,6X19,05	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,71	ARCELORMITTAL ROMAN	815637	B 28234/1
				1	11,75	ARCELORMITTAL ROMAN	815637	B 28234/1
				1	11,5	ARCELORMITTAL ROMAN	815637	B 28234/1
			Total:	**3**	**34,96**			
70000		273X15,09	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					

BUREAU VERITAS ITALY
WITNESSED ~~NOTED~~ REVIEWED
SURVEYOR & BOTH
DATE 14 FEB. 2024

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000868** **Rev. N°:** **0** **Date:**

Inspection Date: 14/02/2024

Ref.: 1723002208 123A40D

Our Job n. 324000006

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.			
				1	10,9	ARCELORMITTAL ROMAN	70418	B 25884/1
				1	11,17	ARCELORMITTAL ROMAN	70418	B 25884/1
				1	11,31	ARCELORMITTAL ROMAN	70418	B 25884/1
				1	11,1	ARCELORMITTAL ROMAN	70418	B 25884/1
				1	10,96	ARCELORMITTAL ROMAN	70418	B 25884/1
			Total:	**5**	**55,44**			
90000		168,3X21,95	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	7,37	ARCELORMITTAL ROMAN	1215866	B 26490/1
			Total:	**1**	**7,37**			

BUREAU VERITAS ITALY
WITNESSED ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB 2024

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. 2400002 SIDERPIGHI JOB N°24000026 OUR DDT N°24000071 OF 10/01/24
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

Válcovny trub Chomutov, a.s.

Kollárova 1229, 698 01 Veselí nad Moravou, Czech Republic www.vtchomutov.cz

Inspekční certifikát
Abnahmeprüfzeugnis
Inspection Certificate
Certificat de Reception **EN 10204:2004/3.1**

Atest č. - Attest Nr.
Certificate No - Certificat No : **1672/21**

Objednávka č. - Bestell Nr.
Order No - No de la commande :
0218/21B-rev
Code : 2140403
Zakázka č. - Bestell Nr. - Order No - Commande No:
651072

Zákazník - Besteller - Customer - Client:
Incos Praha s.r.o.

Karlovo náměstí 288/17
Nové Město
120 00 Praha 2
Czech Republic

Znak výrobce - Herstellerszeichen
Brand of the manufacture-Marque du fabricant:

Razítko znalce - Stempel des Sachverständigen
Inspector's stamp - Poincon de l'expert **TK7**

Ocelové bezešvé trubky - Nahtlose Stahlrohre - Seamless steel tubes - Tubes en aciers sans soudure
outside and inside pickled without lacquer / außen und innen gebeizt ohne Lack geschützt

Úkosy - Beveled ends
plain ends / glatte Enden

Technické požadavky - Prüfgrundlagen/Anforderugen - Technical requirements/Demand - Exigences techniques:
EN ISO 3183:2019 PSL2 + annex A EN 10210-1:2006 EN 10210-2:2006/AC:2007-02 EN 10297-1:2003 EN 10216-3:2013 TC1

Materiál - Werkstoff - Material - Matière:	Dle - Entsprechend - According to - Selon:	Vydání - Ausgabe - Edition - Edition:
L360NE	EN ISO 3183	2019
S355J2H	EN 10210-1	2006
E355	EN 10297-1	2003
P355N	EN 10216-3	2013

Stav dodávky - Lieferzustand - State of delivery - Etat de livraison:
Hot rolled - Warmgewalzt - normalized 925 +/- 15 °C - cooled in air

Způsob zpracování tavby - Erschmelzungsart - Melting process - Procédé d'élaboration:
Electric steel - Fully killed - Elektrostahl - Beruhigter Stahl - vacuum E+LF+VD

Značení - Kennzeichnung - Marking - Marquage:
Stencilled / gespritzt : logo VT EN ISO 3183 559,0 x 25,00 L360NE PSL2 SMLS HEAT No. (Heat no./Schmelzennumer) TESTED 19,3 MPa LENGTH (length/länge) ... m EN 10210-S355J2H EN10297-1-E355N EN 10216-3-P355N TC1 559,0 x 25,00 (Heat no./Schmelzennummer)

Tolerance:

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

Specifikace - Specification:

Rozsah dodávky - Umfang der Lieferung - Extent of material delivery - Liste descriptive

Kusy Stücke Pieces Pièces	Celková délka Gesamtlänge Total length Longueur totale [m]	Celková hmotnost Gesammasse Total mass Masse totale [t]	Rozměry Dimensionen Dimensions Dimensions [mm]	Tavba číslo Schmelze Nr. Heat No. No Coulée	Vodní tlak Druckprobe Hydr. Test Essai hydraulique [MPa]	Avizo: Aviso: Advice: Avis:	Datum: Datum: Date: Date:
10	76,080	25,297	559,0 x 25,00	10299	18.500	15080021	13.09.2021
2	15,270	5,077	3 - 15 m	10306	10 sec.	15080121	13.09.2021
7	53,670	17,844		10310			

Country of melt - Czech republic.
The Manufacturer declares that it is certified by the notified body TÜV NORD reg. No 0045 according to Article 4.3 Annex I of Directive 2014/68/EU and AD-2000 Merkblatt W0 and EN 10210-1:2006 appendix to ZA CPR (EU) No. 305/2011.
Uvedené výrobky jsou ve shodě s předpisy, které jsou specifikovány kupní smlouvou. -Angegebene produkte sind in einklang mit den vorschriften, die im Kaufvertrag spezifiziert werden.We thereby declare that the above mentioned products were manufactured in accordance with specifications and contract requirements. - Des produits indiqués sont dans un accord avec les disposition contrait de vente on spécifie.
Raw material by used for pipe production is without radioactive contamination.

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou
Jana SOCHROVÁ IČ: 227 74 645

Chomutov J.....15.09.2021.....
Dne - Datum - Date - Date

Příloha-Anlage-Annex-Annexe 1

Zodpovědná osoba - Der Werkssachverständige - Inspector-le responsable

Approved by CFERMI on 04/11/21

Approved by QUALITY2 on 13/02/24

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TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. 2400002 SIDERPIGHI JOB N°24000026 OUR DDT N°24000071 OF 10/01/24
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

Válcovny trub Chomutov, a.s.

Kollárova 1229, 698 01 Veselí nad Moravou, Czech Republic www.vtchomutov.cz

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Nové Město
120 00 Praha 2
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Znak výrobce - Herstellerszeichen
Brand of the manufacture-Marque du fabricant:

Razítko znalce - Stempel des Sachverständigen
Inspector's stamp - Poincon de l'expert **TK7**

CE

07
0045 - CPR - 0887

Válcovny trub Chomutov, a.s.
Nerudova 679
430 01 Chomutov

S355J2H EN 10210-1:2005

Dutý profily tvářené za tepla z konstrukčních ocelí
Warmgefertigtes Hohlprofil für den Stahlbau
Hot rolled hollow section for steel construction

Prohlášení o vlastnostech (POV)
Leistungserklärung (LE) 001-26
Declaration of Performance (DOP)

Prohlášení o vlastnostech (POV) je k nahlédnutí zde:	www.vtchomutov.cz/cz/produkty/ke-stazeni/ke-stazeni.html
Die Leistungserklärung (LE) ist hier zu finden:	www.vtchomutov.cz/cz/produkty/ke-stazeni/ke-stazeni.html
The Declaration of Performance (DoP), see here:	www.vtchomutov.cz/en/products/downloads/downloads.html

Doplňující údaje - Zusätzliche - Additional remarks - Autres remarques:
Visual inspection and dimensional check without objection.
Visuel - und Masskontrolle ohne Beanstandung.

BUREAU VERITAS
ITALY
~~INTERCEPTED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

Country of melt - Czech republic.
The Manufacturer declares that it is certified by the notified body TÜV NORD reg. No 0045 according to Article 4.3 Annex I of Directive 2014/68/EU and AD-2000 Merkblatt W0 and EN 10210-1:2006 appendix to ZA CPR (EU) No. 305/2011.
Uvedená výrobky jsou ve shodě s předpisy, které jsou specifikovány kupní smlouvou. -Angegebene produkte sind in einklang mit den vorschriften, die im Kaufvertrag spezifiziert werden.We thereby declare that the above mentioned products were manufactured in accordance with specifications and contract requirements. - Des produits indiqués sont dans un accord avec les disposition contrait de vente on spécifie.
Raw material by used for pipe production is without radioactive contamination.

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou

Chomutov J. 15.09.2021
Dne - Datum - Date - Date

Příloha-Anlage-Annex-Annexe 2

Jana SOCHROVÁ IČ: 227 74 645
Zodpovědná osoba - Der Werkssachverständige - Inspector-le responsable

Approved by CFERMI on 04/11/21

Approved by QUALITY2 on 13/02/24

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ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. 2400002 SIDERPIGHI JOB N°24000026 OUR DDT N°24000071 OF 10/01/24
N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou, Czech Republic www.vtchomutov.cz

Příloha - Anlage - Annex - Annexe 3

Výsledky zkoušek - Ergebnis der Prüfungen - Test results - Résultats des tests

Atest č. - Attest Nr. - Certificate No - Certificat No : **1672/21** **15.09.2021**

Mechanické zkoušky-Mechanische Prüfungen-Mechanical tests-Tests méchaniques						ČSN EN ISO 6892-1				ČSN ISO 148-1	
		Rozměry vzorku Probeabmessung Dim. of. Specimen Dim. de l'echantillon		Odběr vzorku Probenentnahme Specimen Prélevement		Mez kluzu Strack/Dehngrenze Yield strength/ Proof stress Limite d'elasticité	Pevnost v tahu Zugfestigkeit Tensile strength Résistence á la traction	Tažnost Bruchdehnung Elongation Allongement	Kontrakce Brucheinschnürung Reduction of area Contraction	Nárazová práce Schlagarbeit Energy of impact Energie de rupture	Vrub-Houževnatost Kerbschlagzähigkeit Impact strength Résilience
Č. zkoušky Probe Nr. Test No No du test	Číslo tavby Schmelze Nr. Heat No No coulée	Tloušťka Dicke Thickness Epaisseur mm	Šíře Breite Width Largeur mm	Směr Richtung Direction Direction	Zkuš. teplota Prüftemperatur Test temperature Temperature du test C°	ReH MPa	Rm MPa	A5 %	Z %	Kv J	J/cm2
4681	10299		Ø10	L	20	426	550	34,30			
	10299		10,00	T	-20					105	
	10299				-20					111	
	10299				-20					120	
	10299				A					112	
						Rt0,5					
4681	10299		Ø1/2	L	20	389	556	34,00			
	10299		10,00	T	0					134	
	10299				0					149	
	10299				0					153	
	10299									A 145	
						ReH					
4704	10306		Ø10	L	20	430	560	34,00			
	10306		10,00	T	-20					150	
	10306				-20					137	
	10306				-20					144	
	10306				A					144	
						Rt0,5					
4704	10306		Ø1/2	L	20	411	567	33,60			
	10306		10,00	T	0					200	
	10306				0					200	
	10306				0					202	
	10306									A 201	
						ReH					
4694	10310		Ø10	L	20	424	553	34,70			
	10310		10,00	T	-20					148	
	10310				-20					140	
	10310				-20					136	
	10310				A					141	
						Rt0,5					
4694	10310		Ø1/2	L	20	390	559	34,60			
	10310		10,00	T	0					208	
	10310				0					209	
	10310				0					210	
	10310									A 209	

L = Podél - Längs - Along - En longueur; T = Příčně = Quer = Transverse = En travers, A = Average

BUREAU VERITAS ITALY REVIEWED SURVEYOR DATE 14 FEB. 2024

Chomutov 15.09.2021
One - Datum - Date - Date

Jana SOCHROVÁ
Zodpovědná osoba - Der Werksachverständige - Inspecteur responsable

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou
IČ: 227 74 645

Approved by CFERMI on 04/11/21

Approved by QUALITY2 on 13/02/24

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ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
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N° 1 MT 7,31 HEAT 10306 DIMENSIONS 559 x 25

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou, Czech Republic www.vtchomutov.cz

Příloha - Anlage - Annex - Annexe
4

Výsledky zkoušek - Ergebnis der Prüfungen - Test results - Résultats des tests

Atest č. - Attest Nr. - Certificate No - Certificat No : **1672/21** **15.09.2021**

Technologické zkoušky - Technologische Prüfungen - Technological test - Test technologiques:
Ultrasonic test satisfied acc to long. EN ISO 10893-10 U3/C -100% pipe. Flattening test satisfied acc to EN ISO 8492. Performing a random check of residual remnant magnetism max. 30 Gauss.

Chemické složení - Chemische Zusammensetzung - Chemical composition - Composition chimique (%)

Tavba číslo / Schmelze Nr. / Heat No / No Coulée — Heat analysis (S) / product analysis (K)

	C	Mn	Si	P	S	Cr	Ni	Cu	Mo	V	Nb	Ti	Al	N	B	Cev	Co
10299S	0,15	1,28	0,22	0,013	0,005	0,08	0,11	0,21	0,04	0,05	0,015	0,002	0,033	0,009	0,0004	0,42	
10299K	0,16	1,31	0,23	0,013	0,004	0,07	0,10	0,19	0,04	0,05	0,016	0,001	0,028	0,008	0,0002	0,43	
10299K	0,16	1,30	0,22	0,012	0,004	0,07	0,10	0,19	0,04	0,05	0,014	0,001	0,028	0,008	0,0002	0,43	
10306S	0,15	1,35	0,22	0,012	0,001	0,06	0,10	0,17	0,03	0,05	0,015	0,002	0,028	0,009	0,0003	0,42	
10306K	0,16	1,35	0,22	0,012	0,001	0,06	0,09	0,16	0,03	0,06	0,015	0,001	0,022	0,007	0,0002	0,43	
10306K	0,16	1,35	0,22	0,013	0,001	0,06	0,09	0,16	0,03	0,06	0,015	0,001	0,022	0,007	0,0002	0,43	
10310S	0,15	1,32	0,22	0,014	0,003	0,10	0,11	0,15	0,03	0,05	0,015	0,002	0,027	0,008	0,0003	0,42	
10310K	0,16	1,34	0,22	0,012	0,002	0,10	0,09	0,13	0,03	0,05	0,015	0,001	0,022	0,007	0,0002	0,43	
10310K	0,16	1,34	0,22	0,013	0,001	0,10	0,09	0,13	0,03	0,05	0,016	0,001	0,023	0,007	0,0002	0,43	

Technologische Prüfungen:
Die Ultraschallprüfung längs nach EN ISO 10893-10 U3/C- 100% Rohr.
Ringfaltversuch ohne Beanstandung nach EN ISO 8492.
Es wurde eine zufällige Kontrolle des Restmagnetismus durchgeführt max. 30 Gauss.

BUREAU VERITAS ITALY
WITNESSED - NOTED - REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

Chomutov 15.09.2021
Dne - Datum - Date - Date

Jana SOCHROVÁ
Zodpovědná osoba - Der Werkssachverständige - Inspecteur responsable

Válcovny trub Chomutov, a.s.
Kollárova 1229, 698 01 Veselí nad Moravou
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Approved by CFERMI on 04/11/21

Approved by QUALITY2 on 13/02/24

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L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ilac-MRA ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01122 **Data** Date FEBRUARY, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000006
L.P.M. ORDER: 24-000393

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1723002208 123A40D

Norma di collaudo Technical specification: UNI EN 10210-1:2006 // UNI EN 10216-3:2013

Data ingresso materiale Date of material income: 19/02/2024 D.D.T. No. 202401032

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA01140	006/1	TEST COUPON FROM PIPE O.D. 559, THK. 25 MM

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto – Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 559, THK. 25 MM	UNI EN 10210-1:2006 S355J2H UNI EN 10216-3:2013 P355N	006/1	24CA01140	10306

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/016

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ilac-MRA

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01122

Data Date FEBRUARY, 26/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **UNI EN ISO 6892-1:2020** **Data delle prove** – Date of testing: **FEBRUARY, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El%	
								ReH Richiesto Required	ReH Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%
006/1	24CA01140	24PR05176	Ø 12.45	121.74	50	TB	+ 24	≥ 345	401	≥ 490 ≤ 630	545	≥ 20	33.6

Legenda – Legend: E: EXTRADOS; I: INTRADOS; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Note – Notes: REQUIRED VALUES ACC. TO UNI EN 10216-3:2013.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR (BOTTI) DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
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Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01122 | **Data** Date FEBRUARY, 26/2024 | **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: UNI EN ISO 148-1:2016 KV2 | Data delle prove – Date of testing: FEBRUARY, 26/2024

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
006/1	24CA01140	24PR05177	10x10x55	LB	-20	≥ 20	171	171	153	165				-	

Note – Notes: TEST TEMPERATURE AND VALUES ACC. TO UNI EN 10210-1:2006.

FINE RAPPORTO DI PROVA / END OF TEST REPORT.

Legenda – Legend: B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 2 MT 19,68 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer:	MILL TEST CERTIFICATE	Page 1/4	
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.1/2004 -	B 28684/2 17.11.2023	ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.008 tons - lbs	Total Length: 39,34 meters - feets	Pieces 4	Bundles -

Buyer's reference	PO NO. : OF230668
Contract	50005988

Item	Item Client
23	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 406.40 x 21.44 mm - | Schedule: 80 | Length: 8.00 - 10.00 m - | -

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NLITC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
72580		Heat analysis		0.15	1.23	0.22	0.003	0.012	0.07	0.05	0.14	0.036	0.01	0.063	0.001	0.001	0.0002	0.0068
72580	23-1002	Product analysis		0.15	1.22	0.20	0.003	0.012	0.06	0.04	0.14	0.035	0.01	0.062	0.001	0.001	0.0002	0.0066
72580	23-1002	Product analysis		0.15	1.22	0.20	0.003	0.012	0.06	0.05	0.13	0.035	0.01	0.062	0.001	0.001	0.0002	0.0065

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
72580		Heat analysis		5.29	0.064	0.065	0.285	0.40	0.22
72580	23-1002	Product analysis		5.30	0.063	0.064	0.274	0.39	0.21
72580	23-1002	Product analysis		5.38	0.063	0.064	0.264	0.39	0.20

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 24/11/23

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 2 MT 19,68 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28684/2
17.11.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.008 tons - lbs	39.34 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 406.40 x 21.44 mm - Schedule: 80 - Length: 8.00 - 10.00 m - - -

Item	Item Client
23	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
72580	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3060	404.00	-	519.00	-	37.20	0.78
72580	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3060	397.00	-	521.00	-	36.30	0.76
72580	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	23-1727	394.90	-	514.60	-	33.30	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
72580	23-3950	Transversal	10x10x55	0	-	216	229	200	27.0	215	-	-	-	100	100	100	1.91	1.97	1.79
72580	23-3951	Longitudinal	10x10x55	-52	27.0	236	245	220	40.0	234	-	-	-	100	100	100	1.99	2.04	1.93

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.- OD	Midwall	ID	End A	End B	HRC max.22
72580	23-3575	-	-	-	-	-	-	-	<20
72580	23-3575	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED / NOTED / REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

Quality Control Representative

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Approved by S.COZZANI on 24/11/23

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 3/4 B 28684/2 17.11.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.008 tons - lbs	Total Length: 39.34 meters - feets	Pieces 4	Bundles -

Buyer's reference: PO NO. : OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50005988	Dimensions: 406.40 x 21.44 mm - / Schedule: 80 / Length: 8.00 - 10.00 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
23	-		205	-	20.5	10	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
72580	23-956	450	290.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
72580	23-2928	OK
72580	23-2928	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
72580	23-523	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
72580	4	39.34	8008

BUREAU VERITAS ITALY ~~ANNULLED~~ REVIEWED SURVEYOR F. BOTTI DATE 14 FEB 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 24/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 2 MT 19.68 HEAT 72580 DIMENSIONS 406,4 x 21,44

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -						Page 4/4 B 28684/2 17.11.2023	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES						Total weight: 8.008 tons - lbs	Total Length: 39.34 meters - feets	Pieces 4 / Bundles -
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Buyer's reference PO NO. : OF230668	Dimensions: 406.40 x 21.44 mm -		Schedule: 80				Length: 8.00 - 10.00 m -	- -	
Contract 50005988									

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
23	-		205	-	20.5	10	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 26 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 24/11/23

Formular 12A rev 9

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
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http://www.lpmsnc.it

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ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01123

Data Date FEBRUARY,26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000006
L.P.M. ORDER: 24-000393

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1723002208 123A40D

Norma di collaudo Technical specification: ASTM A333/A333M-18 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 19/02/2024 DDT: 202401032

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA01141	006/2	TEST COUPON FROM PIPE O.D. 406.40 mm WTH. 21.44 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.40 mm WTH. 21.44 mm	ASTM A333/A333M-18 Gr.6 API 5L 46th Ed. X52 PSL2	006/2	24CA01141	72580

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/016

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR E.BOTTI DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01123

Data Date FEBRUARY,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22** **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-18 Gr. 6						≥ 240		≥ 415		≥ 16.5			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.3		≤0.93	
006/2	24CA01141	24PR05179	Ø 12.43	121.35	50	T	+ 24		369		563		32.0		0.65

Note: REQUIREMENTS ACC. TO ASTM A333/A333M-18 AND API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS S.A. ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01123 | **Data** Date FEBRUARY,26/2024 | **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22 KV8** | **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
NO.	NO.	NO.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
006/2	24CA01141	24PR05178	10x10x55	BLM	-50	≥ 27/27	95	105	112	104									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/016.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 3 MT 34,96 HEAT 815637 DIMENSIONS 355,6 x 19,05

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/4 B 28234/1 28.08.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 7.371 tons - lbs	Total Length: 46.62 meters - feets	Pieces 4	Bundles -

Buyer's reference: PO NO. : OF230552 rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;		
Contract 50005926	Dimensions: 355.60 x 19.05 mm -	Schedule: 80	Length: 10.00 - 11.80 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
3	-		205	-	20.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
815637		Heat analysis		0.14	1.22	0.22	0.005	0.011	0.05	0.07	0.14	0.037	0.01	0.064	0.002	0.003	0.0001	0.0080
815637	23-734	Product analysis		0.14	1.20	0.22	0.005	0.010	0.04	0.07	0.14	0.036	0.01	0.062	0.002	0.003	0.0001	0.0078
815637	23-734	Product analysis		0.14	1.21	0.20	0.004	0.010	0.05	0.06	0.13	0.036	0.01	0.062	0.002	0.003	0.0001	0.0078

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
815637		Heat analysis		4.63	0.066	0.069	0.269	0.38	0.20
815637	23-734	Product analysis		4.62	0.064	0.067	0.257	0.38	0.19
815637	23-734	Product analysis		4.62	0.064	0.067	0.257	0.38	0.19

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.ROTH DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 04/09/23

Formular 12A rev 9

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ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 3 MT 34,96 HEAT 815637 DIMENSIONS 355,6 x 19,05

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28234/1
28.08.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.371 tons - lbs	46.62 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1
Contract 50005926

Dimensions: 355.60 x 19.05 mm
-
Schedule: 80
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
3	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
815637	Longitudinal Flat	50.8	-	40.00	-	20.30	-	812.0	-	23-2416	425.00	-	534.00	-	43.90	0.80
815637	Longitudinal Flat	50.8	-	40.00	-	20.70	-	828.0	-	23-2416	427.00	-	536.00	-	45.10	0.80
815637	Longitudinal Flat	-	-	20.00	-	19.80	-	396.0	-	23-1385	424.00	-	533.30	-	41.50	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
815637	23-3168	Longitudinal	10x10x55	-52	27.0	193	186	189	40.0	189	-	-	-	95	95	95	1.71	1.65	1.68
815637	23-3169	Transversal	10x10x55	0	-	178	183	175	27.0	179	-	-	-	95	95	95	1.56	1.62	1.55

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
815637	23-2075	-	-	-	-	-	-	-	<20
815637	23-2075	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY ~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 04/09/23

Formular 12A rev.9

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Manufacturer:	MILL TEST CERTIFICATE	Page 3/4
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1 ROMAN, NEAMT ROMANIA	according to EN 10204/3.1/2004 -	B 28234/1 28.08.2023

ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 7.371 tons - lbs	Total Length: 46.62 meters - feets	Pieces 4	Bundles -

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference	PO NO. : OF230552 rev.I	Dimensions: 355.60 x 19.05 mm -	Schedule: 80	Length: 10.00 - 11.80 m -	- -
Contract	**50005926**				

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
3	-		205	-	20.5	5	

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
815637	23-793	450	290.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
815637	23-2337	OK
815637	23-2337	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
815637	23-428	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
815637	4	46.62	7371

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 04/09/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 3 MT 34,96 HEAT 815637 DIMENSIONS 355,6 x 19,05

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -					Page 4/4 **B 28234/1** **28.08.2023**	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 7.371 tons - lbs	Total Length: 46.62 meters - feets	Pieces: 4 Bundles: -
Buyer's reference: PO NO. : OF230552 rev.1 **Contract 50005926**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
	Dimensions: 355.60 x 19.05 mm -		Schedule: 80			Length: 10.00 - 11.80 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
3	-		205	-	20.5	5	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 20 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 04/09/23

Formular 12A rev.9

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01124

Data Date FEBRUARY,26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettuato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000006
L.P.M. ORDER: 24-000393

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1723002208 123A40D

Norma di collaudo Technical specification: ASTM A333/A333M-18 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 19/02/2024 DDT: 202401032

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA01143	006/3	TEST COUPON FROM PIPE O.D. 355.6 mm WTH. 19.05 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 355.6 mm WTH. 19.05 mm	ASTM A333/A333M-18 Gr.6 API 5L 46th Ed. X52 PSL2	006/3	24CA01143	815637

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/016

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR E.BOTTI DATE 26 FEB. 2024	E.FERRI	DOTT. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01124 | **Data** Date FEBRUARY,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22** | Data delle prove – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-18 Gr. 6						≥ 240		≥ 415		≥ 30			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 25.3		≤0.93	
006/3	24CA01143	24PR05181	19.09 x 18.99	362.52	50	L	+ 24		370		510		44.6		0.73

Note: REQUIREMENTS ACC. TO ASTM A333/A333M-18 AND API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 FEB 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI PIACENZA Prov. N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01124 **Data** Date FEBRUARY,26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22 KV8** **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
006/3	24CA01143	24PR05180	10x10x55	BLM	-50	≥ 27/27	129	145	102	125										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/016.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR E.BOTTI DATE 26 FEB. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 PROV. PIACENZA

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 5 MT 55,44 HEAT 70418 DIMENSIONS 273 x 15,09

Manufacturer:	MILL TEST CERTIFICATE	Page 1/6	
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.1/2004 -	B 25884/1 29.08.2022	ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 25.745 tons - lbs	Total Length: 268.22 meters - feets	Pieces 24	Bundles -

Buyer's reference	PO NO. : OF220305 Rev.0	Standard:	API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;
Contract	50005502	Dimensions: 273.00 x 15.09 mm -	Schedule: 80

Length: 10.00 - 11.80 m -	- -

Item	Item Client
6	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
70417		Heat analysis		0.13	1.25	0.17	0.004	0.015	0.11	0.08	0.18	0.032	0.01	0.069	0.002	0.001	0.0002	0.0070
70418		Heat analysis		0.15	1.22	0.21	0.005	0.015	0.11	0.09	0.17	0.034	0.02	0.066	0.001	0.001	0.0003	0.0090
70420		Heat analysis		0.14	1.23	0.19	0.004	0.015	0.13	0.09	0.18	0.032	0.01	0.072	0.001	0.001	0.0002	0.0085
70417	22-568	Product analysis		0.13	1.26	0.18	0.004	0.013	0.11	0.07	0.17	0.031	0.01	0.068	0.002	0.001	0.0002	0.0066
70417	22-568	Product analysis		0.13	1.25	0.19	0.004	0.013	0.11	0.08	0.18	0.032	0.01	0.067	0.002	0.001	0.0002	0.0068
70418	22-772	Product analysis		0.14	1.24	0.23	0.005	0.013	0.11	0.08	0.18	0.033	0.02	0.064	0.001	0.001	0.0002	0.0091
70418	22-772	Product analysis		0.14	1.25	0.22	0.005	0.013	0.11	0.08	0.18	0.032	0.02	0.065	0.001	0.001	0.0002	0.0093
70420	22-559	Product analysis		0.14	1.24	0.20	0.003	0.013	0.12	0.10	0.17	0.033	0.01	0.071	0.001	0.001	0.0002	0.0082
70420	22-559	Product analysis		0.14	1.24	0.20	0.004	0.014	0.12	0.10	0.17	0.033	0.01	0.071	0.001	0.001	0.0002	0.0084

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 07/09/22

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ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 5 MT 55,44 HEAT 70418 DIMENSIONS 273 x 15,09

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR. BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -						Page 2/6 B 25884/1 29.08.2022	ArcelorMittal	
Buyer: T.A.I. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND.. 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES						Total weight: 25.745 tons - lbs	Total Length: 268.22 meters - feets	Pieces 24 / Bundles -
Buyer's reference PO NO. : OF220305 Rev.0	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;								
Contract 50005502	Dimensions: 273.00 x 15.09 mm -		Schedule: 80				Length: 10.00 - 11.80 m -		- -
Item: 6 / Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 5		Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max.	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
70417		Heat analysis		4.57	0.071	0.072	0.372	0.39	0.30
70418		Heat analysis		3.78	0.067	0.068	0.368	0.41	0.30
70420		Heat analysis		3.76	0.073	0.074	0.394	0.41	0.32
70417	22-568	Product analysis		4.70	0.070	0.071	0.361	0.39	0.29
70417	22-568	Product analysis		4.71	0.069	0.070	0.370	0.39	0.30
70418	22-772	Product analysis		3.63	0.065	0.066	0.376	0.40	0.31
70418	22-772	Product analysis		3.44	0.066	0.067	0.377	0.40	0.31
70420	22-559	Product analysis		4.02	0.072	0.073	0.373	0.40	0.30
70420	22-559	Product analysis		3.93	0.072	0.073	0.373	0.40	0.30

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR & BOTH DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 07/09/22

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 25884/1

29.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
25.745 tons - lbs	268.22 meters - feets	24	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF220305 Rev.0

Contract 50005502

Dimensions: 273.00 x 15.09 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
6	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
70417	Longitudinal Flat	50.8	-	40.00	-	16.20	-	648.0	-	22-3153	417.00	-	526.00	-	43.80	0.79
70417	Longitudinal Flat	50.8	-	40.00	-	16.50	-	660.0	-	22-3153	421.00	-	528.00	-	43.50	0.80
70417	Longitudinal Flat	-	-	20.00	-	16.60	-	332.0	-	22-2221	414.20	-	520.20	-	38.40	0.80
70418	Longitudinal Flat	50.8	-	40.00	-	16.80	-	672.0	-	22-3153	424.00	-	525.00	-	44.40	0.81
70418	Longitudinal Flat	50.8	-	40.00	-	16.70	-	668.0	-	22-3153	427.00	-	529.00	-	44.00	0.81
70418	Longitudinal Flat	-	-	20.00	-	16.30	-	326.0	-	22-2221	418.10	-	523.90	-	38.90	0.80
70420	Longitudinal Flat	50.8	-	40.00	-	16.40	-	656.0	-	22-3153	414.00	-	521.00	-	44.60	0.79
70420	Longitudinal Flat	-	-	20.00	-	15.70	-	314.0	-	22-2221	423.20	-	525.20	-	39.40	0.81

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
70417	22-4788	Transversal	10x10x55	0	-	188	171	176	27.0	178	-	-	-	95	95	95	1.70	1.54	1.58
70417	22-4789	Longitudinal	10x10x55	-52	27.0	206	194	217	40.0	206	-	-	-	100	95	100	1.84	1.75	1.91
70418	22-4788	Transversal	10x10x55	0	-	194	174	183	27.0	184	-	-	-	95	95	95	1.74	1.57	1.64
70418	22-4789	Longitudinal	10x10x55	-52	27.0	201	212	220	40.0	211	-	-	-	100	100	100	1.80	1.88	1.93
70420	22-4788	Transversal	10x10x55	0	-	203	192	179	27.0	191	-	-	-	100	95	95	1.81	1.73	1.62
70420	22-4789	Longitudinal	10x10x55	-52	27.0	216	208	226	40.0	217	-	-	-	100	100	100	1.90	1.85	1.95

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR C. BOTTI
DATE 14 FEB. 2024

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 07/09/22

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 5 MT 55,44 HEAT 70418 DIMENSIONS 273 x 15,09

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/6 B 25884/1 29.08.2022	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 25.745 tons - lbs	Total Length: 268.22 meters - feets	Pieces 24	Bundles -

Buyer's reference: PO NO. : OF220305 Rev.0	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015:		
Contract 50005502	Dimensions: 273.00 x 15.09 mm -	Schedule: 80	Length: 10.00 - 11.80 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
6	-		205	-	20.5	5	

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
70417	22-2893	-	-	-	-	-	-	-	<20
70417	22-2893	-	-	-	-	-	-	-	<20
70418	22-2893	-	-	-	-	-	-	-	<20
70418	22-2893	-	-	-	-	-	-	-	<20
70420	22-2893	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 14 FEB 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 07/09/22

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 25884/1
29.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

Buyer's reference: PO NO. : OF220305 Rev.0

Contract 50005502

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
25.745 tons - lbs	268.22 meters - feets	24	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;

Dimensions: 273.00 x 15.09 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
6	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

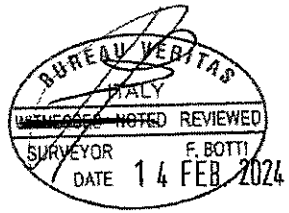
Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
70417	22-1102	450	299.00	-
70418	22-1102	450	301.30	-
70420	22-1102	450	297.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
70417	22-4514	OK
70417	22-4514	OK
70418	22-4514	OK
70418	22-4514	OK
70420	22-4514	OK
70420	22-4514	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
70417	22-989	0	10
70418	22-989	0	10
70420	22-989	0	10



We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 07/09/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR. BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 6/6 B 25884/1 29.08.2022	ArcelorMittal

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 25.745 tons - lbs	Total Length: 268.22 meters - feets	Pieces 24	Bundles -

Buyer's reference	PO NO. : OF220305 Rev.0
Contract	50005502

Item	Item Client
6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;

Dimensions: 273.00 x 15.09 mm -	Schedule: 80	Length: 10.00 - 11.80 m -	- -

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
70417	8	89.58	8598
70418	15	167.19	16048
70420	1	11.45	1099

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ArcelorMittal Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara -Romania.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 12 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED LISTED REVIEWED SURVEYOR F.BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 07/09/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

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ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01125

Data Date FEBRUARY,26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c. Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova. Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati. In caso di prova presenziale da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c. All the results described in this report refer only to the tested samples. Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded. In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000006
L.P.M. ORDER: 24-000393

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1723002208 123A40D

Norma di collaudo Technical specification: ASTM A333/A333M-18 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 19/02/2024 DDT: 202401032

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA01144	006/4	TEST COUPON FROM PIPE O.D. 273 mm WTH. 15.09 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 15.09 mm	ASTM A333/A333M-18 Gr.6 API 5L 46th Ed. X52 PSL2	006/4	24CA01144	70418

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/016

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F.BOTTI DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

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ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01125

Data Date FEBRUARY,26/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22**

Data delle prove – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
			ASTM A333/A333M-18 Gr. 6					≥ 240		≥ 415		≥ 30			
			API 5L 46th Ed. X52 PSL2					≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 24.6		≤0.93	
006/4	24CA01144	24PR05183	18.94 x 16.60	314.40	50	L	+ 24		368		507		42.0		0.73

Note: REQUIREMENTS ACC. TO ASTM A333/A333M-18 AND API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~WORD~~ REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01125 | **Data** Date FEBRUARY,26/2024 | **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22 KV8** | **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
006/4	24CA01144	24PR05182	10x10x55	BLM	-50	≥ 27/27	167	162	146	158										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/016.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,37 HEAT 1215866 DIMENSIONS 168,3 x 21,95

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/6 B 26490/1 30.11.2022	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.708 tons - lbs	Total Length: 109.91 meters - feets	Pieces 17	Bundles 4

Buyer's reference: PO NO. : OF220400 Rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;
Contract 50005542	Dimensions: 168.30 x 21.95 mm - / Schedule: XXS / Length: 6.00 - 8.00 m - / - -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
10	-		205	-	20.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1215866		Heat analysis		0.14	1.22	0.19	0.002	0.010	0.08	0.11	0.18	0.036	0.01	0.069	0.002	0.003	0.0003	0.0050
1215867		Heat analysis		0.14	1.25	0.21	0.002	0.012	0.09	0.11	0.20	0.034	0.01	0.068	0.003	0.002	0.0004	0.0050
1215868		Heat analysis		0.14	1.25	0.22	0.002	0.012	0.09	0.10	0.17	0.035	0.01	0.067	0.003	0.003	0.0004	0.0050
1215866	22-299	Product analysis		0.15	1.24	0.20	0.002	0.008	0.08	0.10	0.17	0.037	0.01	0.067	0.002	0.002	0.0002	0.0052
1215866	22-299	Product analysis		0.15	1.23	0.21	0.002	0.009	0.08	0.10	0.17	0.038	0.01	0.067	0.002	0.002	0.0002	0.0053
1215867	22-860	Product analysis		0.14	1.24	0.20	0.002	0.011	0.08	0.10	0.18	0.035	0.01	0.067	0.003	0.002	0.0003	0.0048
1215867	22-860	Product analysis		0.15	1.24	0.20	0.002	0.010	0.08	0.10	0.18	0.036	0.01	0.066	0.003	0.002	0.0003	0.0050
1215868	22-859	Product analysis		0.14	1.26	0.20	0.002	0.010	0.08	0.09	0.16	0.033	0.01	0.065	0.002	0.002	0.0004	0.0051
1215868	22-859	Product analysis		0.14	1.26	0.21	0.002	0.010	0.08	0.09	0.16	0.033	0.01	0.065	0.002	0.002	0.0004	0.0053

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/12/22

Formular 12A rev.9

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Manufacturer:	MILL TEST CERTIFICATE	Page 2/6	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	according to EN 10204/3.1/2004 -	B 26490/1 30.11.2022	

Buyer:	T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.708 tons - lbs	Total Length: 109.91 meters - feets	Pieces 17	Bundles 4
Buyer's reference	PO NO. : OF220400 Rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;				
Contract 50005542		Dimensions: 168.30 x 21.95 mm -	Schedule: XXS	Length: 6.00 - 8.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
10	-		205	-	20.5	5	-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
1215866		Heat analysis		7.20	0.071	0.074	0.343	0.39	0.27
1215867		Heat analysis		6.80	0.071	0.073	0.373	0.40	0.30
1215868		Heat analysis		7.00	0.070	0.073	0.342	0.40	0.27
1215866	22-299	Product analysis		7.12	0.069	0.071	0.331	0.41	0.26
1215866	22-299	Product analysis		7.17	0.069	0.071	0.331	0.40	0.26
1215867	22-860	Product analysis		7.29	0.070	0.072	0.342	0.40	0.27
1215867	22-860	Product analysis		7.20	0.069	0.071	0.341	0.41	0.27
1215868	22-859	Product analysis		6.47	0.067	0.069	0.319	0.40	0.25
1215868	22-859	Product analysis		6.23	0.067	0.069	0.319	0.40	0.25

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 14 FEB 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/12/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

Page 3/6
B 26490/1
30.11.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.708 tons - lbs	109.91 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF220400 Rev.1

Contract 50005542

Dimensions: 168.30 x 21.95 mm - Schedule: XXS - Length: 6.00 - 8.00 m - -

Item	Item Client
10	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1215866	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	401.00	-	512.00	-	36.90	0.78
1215866	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	495.00	-	509.00	-	35.80	0.97
1215866	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	22-2800	393.60	-	507.00	-	30.50	0.78
1215867	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	497.00	-	511.00	-	36.30	0.97
1215867	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	402.00	-	514.00	-	37.20	0.78
1215867	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	22-2800	396.20	-	509.60	-	31.70	0.78
1215868	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	496.00	-	510.00	-	36.50	0.97
1215868	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-4095	494.00	-	509.00	-	35.70	0.97
1215868	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	22-2800	392.40	-	508.30	-	30.10	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1215866	22-6197	Transversal	10x10x55	0	-	192	207	175	27.0	191	-	-	-	95	100	95	1.73	1.85	1.58
1215866	22-6198	Longitudinal	10x10x55	-52	27.0	201	212	220	40.0	211	-	-	-	100	100	100	1.80	1.88	1.94
1215867	22-6197	Transversal	10x10x55	0	-	211	176	189	27.0	192	-	-	-	100	95	95	1.87	1.59	1.71
1215867	22-6198	Longitudinal	10x10x55	-52	27.0	224	204	213	40.0	214	-	-	-	100	100	100	1.96	1.82	1.89
1215868	22-6197	Transversal	10x10x55	0	-	181	194	206	27.0	194	-	-	-	95	95	100	1.63	1.74	1.84
1215868	22-6198	Longitudinal	10x10x55	-52	27.0	211	219	227	40.0	219	-	-	-	100	100	100	1.88	1.93	1.98

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

BUREAU VERITAS ITALY REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

Quality Control Representative

Formular 12A rev.9

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Approved by QUALITY1 on 06/12/22

ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,37 HEAT 1215866 DIMENSIONS 168,3 x 21,95

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL. 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 4/6 **B 26490/1** **30.11.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.708 tons - lbs	Total Length: 109.91 meters - feets	Pieces: 17 Bundles: 4
Buyer's reference: PO NO. : OF220400 Rev.1 **Contract 50005542**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;			
	Dimensions: 168.30 x 21.95 mm -	Schedule: XXS	Length: 6.00 - 8.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
10	-		205	-	20.5	5	-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1215866	22-3734	-	-	-	-	-	-	-	<20
1215866	22-3734	-	-	-	-	-	-	-	<20
1215867	22-3734	-	-	-	-	-	-	-	<20
1215867	22-3734	-	-	-	-	-	-	-	<20
1215868	22-3734	-	-	-	-	-	-	-	<20
1215868	22-3734	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
[redacted] REVIEWED
SURVEYOR F. BOTTI
DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/12/22

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ROSETTI MARINO S.P.A. P.O.1723002208 123A40D TAL JOB N°324000006
N° 1 MT 7,37 HEAT 1215866 DIMENSIONS 168,3 x 21,95

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 5/6 **B 26490/1** **30.11.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 8.708 tons - lbs	Total Length: 109.91 meters - feets	Pieces: 17 Bundles: 4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015:NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF220400 Rev.1	Dimensions: 168.30 x 21.95 mm -	Schedule: XXS	Length: 6.00 - 8.00 m - / -
Contract 50005542			

Item	Item Client
10	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1215866	22-1484	450	297.40	-
1215867	22-1484	450	302.00	-
1215868	22-1484	450	302.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1215866	22-5515	OK
1215866	22-5515	OK
1215867	22-5515	OK
1215867	22-5515	OK
1215868	22-5515	OK
1215868	22-5515	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1215866	22-1297	0	10
1215867	22-1297	0	10
1215868	22-1297	0	10

BUREAU VERITAS ITALY [illegible] REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/12/22

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Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -					Page 6/6 **B 26490/1** **30.11.2022**		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY		SEAMLESS STEEL LINE PIPES					Total weight: 8.708 tons - lbs	Total Length: 109.91 meters - feets	Pieces: 17 Bundles: 4
		Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015;NACE MR 0175/ISO 15156-1&2-2015;							
Buyer's reference: PO NO. : OF220400 Rev.1		Dimensions: 168.30 x 21.95 mm -		Schedule: XXS			Length: 6.00 - 8.00 m -	-	
Contract 50005542									
Item: 10	Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 5	Steel Grade: L360N/X52N/6/P355NLITC1-PSL2 -		

Heat

Heat	Pieces	Length (m)	Weight (kg)
1215866	5	33.76	2675
1215867	9	56.71	4492
1215868	3	19.44	1541

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Interpipe Europe SA(Producator: Dneprosteel Ucraina) Via San Salvatore 13, PO Box 745 CH-6902 PARADISO-LUGANO SWITZERLAND.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 10 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY ~~ISPEZIONATO~~ NOTED REVIEWED SURVEYOR F. BOTTI DATE 14 FEB. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/12/22

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ilac-MRA

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01126

Data Date FEBRUARY,26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000006
L.P.M. ORDER: 24-000393

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1723002208 123A40D

Norma di collaudo Technical specification: ASTM A333/A333M-18 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 19/02/2024 DDT: 202401032

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA01145	006/5	TEST COUPON FROM PIPE O.D. 168.3 mm WTH. 21.95 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 168.3 mm WTH. 21.95 mm	ASTM A333/A333M-18 Gr.6 API 5L 46th Ed. X52 PSL2	006/5	24CA01145	1215866

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/016

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~WITNESSED~~ REVIEWED SURVEYOR F.BOTTI DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

1053/3402

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01126

Data Date FEBRUARY,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22** **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-18 Gr. 6						≥ 240		≥ 415		≥ 30			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.3		≤0.93	
006/5	24CA01145	24PR05186	Ø 12.45	121.74	50	L	+ 24		376		514		38.0		0.73

Note: REQUIREMENTS ACC. TO ASTM A333/A333M-18 AND API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA n. 524 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ilac-MRA ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° L598 L

RAPPORTO DI PROVA
TEST REPORT

24RP01126 **Data** Date FEBRUARY,26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22 KV8** **Data delle prove** – Date of testing: **FEBRUARY,26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
006/5	24CA01145	24PR05185	10x10x55	BLM	-50	≥ 27/27	172	179	165	172									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/016.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED REVIEWED SURVEYOR F. BOTTI DATE 26 FEB. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002208	123A40D	Q012400355

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **27.05.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 48/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08.09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/3/1** **142394,142396**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to API-5L. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 30.	(B09) **14" x 0,625"** **(355,6 x 15,88 mm)** **8 - 11,8 m**	(B02) **X52N/L360N/6** **P355NL1+N**	(B07) **899086**	(B08) **4**	(B15) **38,51**	(B13) **5119**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,14	1,24	0,19	0,009	0,003	0,10	0,12	0,15
product analysis	0,16	1,23	0,20	0,008	0,004	0,09	0,13	0,15
product analysis	0,16	1,23	0,20	0,008	0,005	0,09	0,13	0,15
(B07) **899086**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,05	0,05	0,034	0,006	0,000	0,000	0,40	
product analysis	0,05	0,05	0,031	0,009	0,000	0,000	0,42	
product analysis	0,05	0,05	0,030	0,008	0,000	0,000	0,42	

Approved by QUALITY2 on 07/05/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa	Rm MPa	A 2" %	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07.C02.C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 899086/5256 899086/5257 Longitudinal	385 383	541 523	48,0 47,5		Mixed area 154 - 188 - 164	169	162 162	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 650	A5 % min 22,0					
899086/5257 Longitudinal	382	521	31,9		117 - 96 - 110	108		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness. Positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5256,5257,5258,5259

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL - TC2.

TÜV 15

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego- Le représentant d' acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
KJ 21/632		TÜV 549	
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	MSc. Eng. Dariusz Gerlich TÜV Inspector	dn. 26.04. 2024 r. 48/2024/TUV Strona Page Page Seite Страница 2/2

TÜV SÜD TAURINGEN

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 07/05/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002208	123A40D	Q012301876

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

16.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23233/1

13.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.910 tons - lbs	44.88 meters - feets	4	1

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210356

Contract 50005083

Dimensions: 168.30 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1212115		Heat analysis		0.15	1.22	0.23	0.002	0.012	0.09	0.11	0.17	0.030	0.01	0.067	0.002	0.002	0.0003	0.0050
1212117		Heat analysis		0.14	1.26	0.22	0.003	0.012	0.07	0.10	0.19	0.034	0.01	0.068	0.002	0.002	0.0003	0.0070
1212115	21-945	Product analysis		0.15	1.23	0.23	0.002	0.012	0.09	0.12	0.16	0.030	0.01	0.067	0.002	0.002	0.0003	0.0054
1212115	21-945	Product analysis		0.15	1.23	0.24	0.002	0.012	0.09	0.12	0.16	0.031	0.01	0.067	0.002	0.002	0.0003	0.0056
1212117	21-1033	Product analysis		0.14	1.26	0.22	0.003	0.013	0.07	0.10	0.18	0.035	0.01	0.068	0.002	0.002	0.0003	0.0073
1212117	21-1033	Product analysis		0.14	1.27	0.22	0.003	0.013	0.07	0.10	0.18	0.035	0.01	0.067	0.002	0.002	0.0003	0.0071

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
1212115		Heat analysis		6.00	0.069	0.071	0.343	0.41	0.27
1212117		Heat analysis		4.86	0.070	0.072	0.342	0.40	0.27
1212115	21-945	Product analysis		5.56	0.069	0.071	0.331	0.41	0.26
1212115	21-945	Product analysis		5.54	0.069	0.071	0.331	0.41	0.26
1212117	21-1033	Product analysis		4.79	0.070	0.072	0.332	0.40	0.26
1212117	21-1033	Product analysis		4.93	0.069	0.071	0.331	0.40	0.26

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 28/10/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23233/1

13.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.910 tons - lbs	44.88 meters - feets	4	1

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210356

Contract 50005083

Dimensions: 168.30 x 10.97 mm - | Schedule: XS/80 | Length: 10.00 - 11.80 m - | - -

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1212115	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	21-3174	421.00	-	527.00	-	41.30	0.80
1212115	Longitudinal Flat	-	-	20.00	-	12.00	-	240.0	-	21-2425	418.30	-	516.70	-	37.10	0.81
1212117	Longitudinal Flat	50.8	-	40.00	-	11.80	-	472.0	-	21-3174	418.00	-	524.00	-	40.80	0.80
1212117	Longitudinal Flat	50.8	-	40.00	-	11.50	-	460.0	-	21-3174	414.00	-	522.00	-	39.70	0.79
1212117	Longitudinal Flat	-	-	20.00	-	11.60	-	232.0	-	21-2425	419.00	-	518.10	-	37.00	0.81

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1212115	21-3898	Longitudinal	10x7.5x55	-52	20.0	170	156	168	30.0	165	-	-	-	95	95	95	1.50	1.36	1.48
1212117	21-3898	Longitudinal	10x7.5x55	-52	20.0	146	166	158	30.0	157	-	-	-	95	95	95	1.30	1.48	1.39

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1212115	21-2640	-	-	-	-	-	-	-	<20
1212115	21-2640	-	-	-	-	-	-	-	<20
1212117	21-2640	-	-	-	-	-	-	-	<20
1212117	21-2640	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY2 on 28/10/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23233/1

13.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.910 tons - lbs	44.88 meters - feets	4	1

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210356

Contract 50005083

Dimensions: 168.30 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
2	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1212115	21-833	450	266.80	-
1212117	21-833	450	269.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1212115	21-4988	OK
1212115	21-4988	OK
1212117	21-4988	OK
1212117	21-4988	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1212115	21-830	0	10
1212117	21-830	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
1212115	1	11.20	477
1212117	3	33.68	1433

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 28/10/21

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 23233/1

13.10.2021

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.910 tons - lbs	44.88 meters - feets	4	1

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2019; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR0103/ISO17945-2015; NACE MR0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210356

Contract 50005083

Dimensions: 168.30 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
2	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1TC1
-

Remarks

PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300706.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 3 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 28/10/21

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1723002208	123A40D	Q012301907

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

12.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 55/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2004 type 3.2
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** T.A.L
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/1/1** **146206, 146207**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC1. Outside diameter tolerances +/-0,75% and +/-0,5% on ends. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to ASME B16.25 fig.3.A. Normalized 900°C/50'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	(B09) **20" x 1,000"** **(508 x 25,40 mm)** **5 - 7 m**	(B02) **X52N/L360N/6** **P355NL1+N**	(B07) **899590**	(B08) **5**	(B15) **33,05**	(B13) **9593**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
heat analysis	0,14	1,26	0,22	0,009	0,003	0,05	0,07	0,15
product analysis	0,15	1,25	0,22	0,008	0,004	0,04	0,07	0,14
product analysis	0,15	1,24	0,22	0,008	0,004	0,04	0,07	0,14
(B07) **899590**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,030	0,009	0,000	0,001	0,39	
product analysis	0,04	0,05	0,026	0,011	0,000	0,001	0,40	
product analysis	0,04	0,05	0,026	0,010	0,000	0,001	0,40	

Approved by QUALITY2 on 10/06/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½" 899590/7497 899590/7498 Longitudinal	362 364	518 518	39,2 33,7		Mixed area 252 - 145 - 164	187	152 153	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 min 650	A5 % min 22,0					
899590/7498 Longitudinal	370	518	34,2		144 - 141 - 131	139		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

7497, 7498, 7499, 7500, 7501.

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL1 - TC1.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego- Le représentant d' acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
KJ 21/634 Z-ca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości Nadzoru Technologicznego Barbara Czyż		dn. 05.06. 2024 r. 55/2024/TUV Strona Page Page Seite Страница 2/2

Approved by QUALITY2 on 10/06/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002208	123A40D	Q012400355

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **27.05.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 48/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/ Strona Page Page Seite Страница 1/2

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08.09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230912	**H2400017/3/1** **142394,142396**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/21/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to API-5L. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 30.	(B09) **14" x 0,625"** **(355,6 x 15,88 mm)** **8 - 11,8 m**	(B02) **X52N/L360N/6** **P355NL1+N**	(B07) **899086**	(B08) **4**	(B15) **38,51**	(B13) **5119**

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,14	1,24	0,19	0,009	0,003	0,10	0,12	0,15
product analysis	0,16	1,23	0,20	0,008	0,004	0,09	0,13	0,15
product analysis	0,16	1,23	0,20	0,008	0,005	0,09	0,13	0,15
(B07) **899086**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,05	0,05	0,034	0,006	0,000	0,000	0,40	
product analysis	0,05	0,05	0,031	0,009	0,000	0,000	0,42	
product analysis	0,05	0,05	0,030	0,008	0,000	0,000	0,42	

Approved by QUALITY2 on 07/05/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa	Rm MPa	A 2" %	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
	acc. to ASTM A370							
(B07.C02.C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: 1½" 899086/5256 899086/5257 Longitudinal	385 383	541 523	48,0 47,5		Mixed area 154 - 188 - 164	169	162 162	
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	Rm 490 650	A5 % min 22,0					
899086/5257 Longitudinal	382	521	31,9		117 - 96 - 110	108		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness. Positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5256,5257,5258,5259

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL - TC2.

TÜV 15

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	Przedstawiciel Zamawiającego Le représentant d' acheteur Purchaser's representative-Vertreter des Bestellers Покупателя представительство (Z05-Z99)	(Z02)
KJ 21/632		TÜV 549	
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	MSc. Eng. Dariusz Gerlich TÜV Inspector	dn. 26.04. 2024 r. 48/2024/TUV Strona Page Page Seite Страница 2/2

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 07/05/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1724000112	122A70C	Q012400054

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **01.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EUROPE STEEL CENTER
Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132528
Our reference: L. Barelds
Your Po nr: PO 1724000112
Your VAT Nr: P.IVA 00082100397

Enquiry Reference: Bouri RFQ Nodes
Offer Reference: ESP1501LBrev03

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no.	Plate no.	MTC	HS CODE	C.o.O.
1	Plates		12000	2500	60	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	1.177,50	14.130,0	947298	152562-1	71243	72085120	Voest Alpine Austria
2	Plates		12000	2500	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	490,63	5.887,5	57407	528858-1	72936	72085120	Ilsenburg Germany
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	57407	530316-1	72984	72085120	Voest/Ilsenburg
4	Plates		12000	2500	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	490,63	5.887,5	57407	528866-1	72936	72085120	Ilsenburg Germany
4	Plates		12000	2500	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	490,63	5.887,5	57407	528863-1	72936	72085120	Ilsenburg Germany
4	Plates		12000	3000	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	588,75	7.065,0	02789	531232-1	72989	72085120	Ilsenburg Germany
4	Plates		12000	3000	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	588,75	7.065,0	02789	531231-1	72989	72085120	Ilsenburg Germany
5	Plates		12000	3050	30	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36,6	12	718,28	8.619,3	863028	181861-1	72000	72085120	Voest Alpine Austria
5	Plates		12000	3050	30	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36,6	12	718,28	8.619,3	951251	195697-1	72437	72085120	Voest Alpine Austria
6	Plates		12000	3000	35	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	824,25	9.891,0	947433	154881-1	71747	72085120	Voest Alpine Austria
6	Plates		12000	3000	35	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	824,25	9.891,0	928821	282106-1	64886	72085120	Voest Alpine Austria
6	Plates		12000	3000	35	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	824,25	9.891,0	926774	281728-1	64886	72085120	Voest Alpine Austria
6	Plates		12000	3000	35	S460G2M Z35 EN10225	3.2 acc EN 10204	1	12000	36	12	824,25	9.891,0	905526	103234-1	58904	72085120	Voest Alpine Austria
7	Plates		12000	2500	40	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	785,00	9.420,0	26954	529130-1	72990	72085120	Ilsenburg Germany
7	Plates		12000	2500	40	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	785,00	9.420,0	00099	529134-1	72990	72085120	Ilsenburg Germany
								16					**132.162,60**					

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4E6-1

Z02 Date 03-03-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0375556/A	A08 Order-No.:	2532476	A07 OrderDat.	14-12-2022	Date of dispatch	02-03-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6848

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009 // MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
753741	154894/2	70	30,00	2051,0	12000	1		5.891	80129	S460MLOVAS
753741	154923/2	10	20,00	2500,0	12000	1		4.830	80125	S460MLOVAS
753741	154929/2	10	20,00	2500,0	12000	1		4.826	80125	S460MLOVAS
753741	154932/2	10	20,00	2500,0	12000	1		4.826	80125	S460MLOVAS
753741	154933/1	10	20,00	2500,0	12000	1		4.830	80125	S460MLOVAS
753741	154933/2	10	20,00	2500,0	12000	1		4.830	80125	S460MLOVAS
859285	154998/1	80	30,00	2500,0	12000	1		7.143	80130	S460MLOVAS
859286	155001/1	80	30,00	2500,0	12000	1		7.149	80131	S460MLOVAS
859286	155002/1	80	30,00	2500,0	12000	1		7.150	80129	S460MLOVAS
859286	155003/1	80	30,00	2500,0	12000	1		7.147	80129	S460MLOVAS
859286	155004/1	80	30,00	2500,0	12000	1		7.143	80129	S460MLOVAS
859727	154868/1	170	40,00	3050,0	12000	1		11.685	80133	S460MLOVAS

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

SAFEGUARDING LIFE - PROPERTY AND THE ENVIRONMENT
DNV
Witnessed ☒ Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2023-03-06
Sign: Antonio R. Zambrano C.

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
859727	154883/1	90	30,00	2500,0	16000	1		9.588	80131	S460MLOVAS
859727	154885/1	90	30,00	2500,0	16000	1		9.585	80131	S460MLOVAS
859727	154888/1	310	30,00	3000,0	16000	1		11.490	80133	S460MLOVAS
859727	154896/2	280	30,00	2051,0	12000	1		5.890	80133	S460MLOVAS
859727	154930/2	10	20,00	2500,0	12000	1		4.831	80125	S460MLOVAS
859727	154930/1	10	20,00	2500,0	12000	1		4.830	80125	S460MLOVAS
859727	154931/2	10	20,00	2500,0	12000	1		4.829	80125	S460MLOVAS
859727	154936/2	10	20,00	2500,0	12000	1		4.827	80125	S460MLOVAS
859727	154937/1	10	20,00	2500,0	12000	1		4.826	80125	S460MLOVAS
859729	154889/1	300	30,00	2500,0	16000	1		9.579	80133	S460MLOVAS
859729	154891/1	300	30,00	2500,0	16000	1		9.584	80133	S460MLOVAS
859729	156151/1	290	30,00	2051,0	16000	1		7.866	80133	S460MLOVAS
859729	156152/1	290	30,00	2051,0	16000	1		7.842	80133	S460MLOVAS
859729	156194/1	100	30,00	3000,0	12000	1		8.625	80131	S460MLOVAS
859729	156196/1	100	30,00	3000,0	12000	1		8.630	80131	S460MLOVAS
859729	156197/1	100	30,00	3000,0	12000	1		8.625	80131	S460MLOVAS
859729	156200/1	60	25,00	3250,0	14000	1		9.109	80129	S460MLOVAS
859729	156203/1	20	20,00	3050,0	16000	1		7.850	80125	S460MLOVAS
859729	156205/1	20	20,00	3050,0	16000	1		7.845	80125	S460MLOVAS
859729	157025/1	280	30,00	2051,0	12000	1		5.881	80133	S460MLOVAS
944915	156873/1	180	40,00	3750,0	14000	1		16.714	80133	S460MLOVAS
944916	156172/1	150	40,00	2500,0	12000	1		9.573	80132	S460MLOVAS
944917	152948/1	190	45,00	3750,0	14000	1		18.870	80133	S460MLOVAS
945463	156781/1	110	30,00	3000,0	16000	1		11.490	80131	S460MLOVAS
945943	153940/1	150	40,00	2500,0	12000	1		9.583	80131	S460MLOVAS
945943	153941/1	150	40,00	2500,0	12000	1		9.575	80131	S460MLOVAS
945943	153942/1	150	40,00	2500,0	12000	1		9.582	80131	S460MLOVAS
945943	154616/2	130	40,00	2051,0	12000	1		7.839	80131	S460MLOVAS
947298	152562/1	210	60,00	2500,0	12000	1		14.510	80133	S460MLOVAS
947298	152734/1	240	60,00	3250,0	13000	1		20.311	80133	S460MLOVAS
947433	154867/1	150	40,00	2500,0	12000	1		9.559	80133	S460MLOVAS
947433	156210/1	50	25,00	2500,0	16000	1		8.015	80129	S460MLOVAS
		Sum				**44**		**375.203**		

B14 - Supplementary information

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864
~~Witnessed~~ X Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2023-03-06
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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
753741	.032	.336	1.620	.007	.0005	.031	.176	.170	.008	.175	.004	.035	.011	.0069	.0002	.0020	.0018	.0020	.0020	.0020	.36
859285	.035	.345	1.610	.006	.0009	.038	.177	.170	.008	.156	.003	.037	.013	.0038	.0002	.0020	.0017	.0020	.0020	.0020	.36
859286	.029	.358	1.700	.006	.0005	.038	.187	.180	.005	.162	.004	.037	.013	.0048	.0002	.0020	.0019	.0020	.0020	.0020	.37
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
859729	.031	.354	1.640	.006	.0006	.034	.178	.180	.008	.169	.004	.036	.010	.0040	.0002	.0020	.0018	.0020	.0020	.0020	.37
944915	.029	.333	1.610	.005	.0006	.038	.191	.170	.009	.155	.004	.037	.012	.0050	.0003	.0020	.0019	.0020	.0020	.0020	.36
944916	.030	.355	1.650	.006	.0010	.040	.187	.170	.010	.152	.004	.037	.013	.0057	.0002	.0020	.0023	.0020	.0020	.0020	.37
944917	.029	.318	1.590	.006	.0010	.031	.174	.170	.008	.163	.003	.035	.011	.0046	.0002	.0020	.0015	.0020	.0020	.0020	.35
945463	.028	.333	1.580	.006	.0006	.033	.180	.170	.007	.163	.004	.035	.012	.0059	.0002	.0020	.0017	.0020	.0020	.0020	.35
945943	.030	.368	1.630	.005	.0007	.039	.189	.180	.016	.174	.004	.036	.013	.0052	.0003	.0020	.0016	.0020	.0020	.0020	.37
947298	.063	.373	1.550	.007	.0006	.037	.176	.270	.008	.159	.003	.027	.013	.0052	.0002	.0020	.0019	.0020	.0020	.0020	.39
947433	.036	.377	1.630	.006	.0004	.033	.174	.170	.007	.165	.003	.036	.012	.0043	.0002	.0020	.0017	.0020	.0020	.0020	.37

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
753741	.15	.039	.050	4.49
859285	.15	.040	.053	10.00
859286	.15	.041	.054	7.92
859727	.15	.039	.050	6.11
859729	.15	.040	.050	8.50
944915	.14	.041	.053	7.60
944916	.15	.041	.054	7.02
944917	.14	.038	.049	6.74
945463	.14	.039	.051	5.59
945943	.15	.040	.053	7.50
947298	.18	.030	.043	7.12
947433	.15	.039	.051	7.67

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
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Reisinger Patrick

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						440	520		17.0			
Set values	<=							700			93.00		
753741	154929	30,0	20.48	F	O	T	535	617	A5	23.6	86.61		
	154932	30,0	20.61	F	O	T	545	619	A5	22.5	87.97		
859727	154930	30,0	20.98	F	O	T	558	645	A5	21.7	86.60		
	154936	30,0	20.58	F	O	T	538	618	A5	23.6	87.02		
859729	156200	30,0	25.63	F	O	T	569	622	A5	22.3	91.54		
	156205	30,0	20.51	F	O	T	559	624	A5	21.4	89.50		
	156206	30,0	20.58	F	O	T	540	643	A5	22.9	84.01		
947433	156208	30,0	25.69	F	O	T	564	622	A5	22.7	90.61		
	>=						420	520		17.0			
Set values	<=							700			93.00		
753741	154894	30,0	30.71	F	O	T	547	606	A5	21.1	90.28		
859285	154998	30,0	30.24	F	O	T	553	617	A5	22.3	89.58		
859286	155002	30,0	30.25	F	O	T	543	608	A5	22.0	89.31		
	155005	30,0	30.33	F	O	T	553	614	A5	22.2	90.10		
859727	154866	30,0	40.75	F	O	T	516	605	A5	22.5	85.40		
	154888	30,0	30.50	F	O	T	540	594	A5	23.4	90.84		
	154896	30,0	30.64	F	O	T	531	591	A5	23.5	89.79		
	154898	30,0	30.94	F	O	T	537	591	A5	23.8	90.85		
859729	154891	30,0	30.72	F	O	T	555	612	A5	24.1	90.64		
	156193	30,0	30.60	F	O	T	549	611	A5	24.2	89.89		
	156196	30,0	30.84	F	O	T	577	628	A5	22.6	91.92		
	157025	30,0	30.41	F	O	T	513	585	A5	23.4	87.74		
944915	156873	30,0	40.79	F	O	T	493	586	A5	23.6	84.08		
944916	134244	30,0	40.64	F	O	T	516	610	A5	23.3	84.62		
945463	156782	30,0	30.66	F	O	T	542	599	A5	23.6	90.48		
945943	153940	30,0	40.70	F	O	T	534	614	A5	22.6	86.96		
	153945	30,0	41.35	F	O	T	491	610	A5	24.4	80.55		
947433	154869	30,0	41.14	F	O	T	484	626	A5	24.0	77.30		
	>=						415	500		17.0			
Set values	<=							675			93.00		

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
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SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV

~~Witnessed~~ Reviewed
And found to comply with:
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Date: 2023-03-06
Sign: Antonio R. Zambrano C.

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						415	500		17.0			
Set values	<=							675			93.00		
944917	152948	Ø	9.97	F	V	T	518	597	A5	26.1	86.84		
	152948	Ø	9.99	F	V	T	513	592	A5	27.7	86.67	001	1
947298	152734	Ø	9.99	F	V	T	455	601	A5	28.8	75.60		
	152734	Ø	9.98	F	V	T	496	593	A5	27.4	83.77	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
753741	154894	CV 10x10	F	O	T	-40	350	356	376	361			
	154929	CV 10x10	F	O	T	-40	406	432	442	427			
	154932	CV 10x10	F	O	T	-40	409	444	452	435			
859285	154998	CV 10x10	F	O	T	-40	359	352	358	356			
859286	155002	CV 10x10	F	O	T	-40	353	347	362	354			
	155005	CV 10x10	F	O	T	-40	317	350	346	338			
859727	154866	CV 10x10	F	O	T	-40	340	330	380	350			
	154888	CV 10x10	F	O	T	-40	370	384	394	383			
	154896	CV 10x10	F	O	T	-40	352	370	368	363			
	154898	CV 10x10	F	O	T	-40	391	437	433	420			
	154930	CV 10x10	F	O	T	-40	401	446	453	433			
	154936	CV 10x10	F	O	T	-40	433	444	448	441			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
859729	154891	CV 10x10	F	O	T	-40	340	356	364	353			
	156193	CV 10x10	F	O	T	-40	352	351	369	357			
	156196	CV 10x10	F	O	T	-40	348	359	381	363			
	156200	CV 10x10	F	O	T	-40	368	372	384	374			
	156206	CV 10x10	F	O	T	-40	329	359	342	343			
944915	156873	CV 10x10	F	O	T	-40	370	377	379	375			
944916	134244	CV 10x10	F	O	T	-40	359	349	363	357			
944917	152948	CV 10x10	F	O	T	-40	361	366	373	367			
	152948	CV 10x10	F	O	T	-40	297	302	313	304	001	1	
	152948	CV 10x10	F	K	T	-40	387	392	400	393			
	152948	CV 10x10	F	K	T	-40	337	332	351	340	001	1	
945463	156782	CV 10x10	F	O	T	-40	327	341	354	341			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
945943	153940	CV 10x10	F	O	T	-40	356	341	348	348			
	153945	CV 10x10	F	O	T	-40	351	344	358	351			
947298	152734	CV 10x10	F	O	T	-40	312	301	308	307			
	152734	CV 10x10	F	O	T	-40	177	110	61	116	001	1	
	152734	CV 10x10	F	K	T	-40	257	239	291	262			
	152734	CV 10x10	F	K	T	-40	248	228	251	243	001	1	
947433	154869	CV 10x10	F	O	T	-40	356	383	411	383			
	156208	CV 10x10	F	O	T	-40	343	347	368	352			
>=						-40	29	29	29	46			
Set values <=													
753741	154894	CV 10x10	F	ZB2	T	-40	321	327	311	320			strain aged 5%, 60 min. at 250°C
859285	154998	CV 10x10	F	ZB2	T	-40	316	316	308	313			strain aged 5%, 60 min. at 250°C
859286	155005	CV 10x10	F	ZB2	T	-40	326	324	347	332			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
859727	154866	CV 10x10	F	ZB2	T	-40	321	292	317	310			strain aged 5%, 60 min. at 250°C
859729	156193	CV 10x10	F	ZB2	T	-40	326	323	315	321			strain aged 5%, 60 min. at 250°C
944915	156873	CV 10x10	F	ZB2	T	-40	330	44	341	238			strain aged 5%, 60 min. at 250°C
944916	134244	CV 10x10	F	ZB2	T	-40	290	331	283	301			strain aged 5%, 60 min. at 250°C
944917	152948	CV 10x10	F	ZB2	T	-40	327	332	346	335			strain aged 5%, 60 min. at 250°C
945463	132752	CV 10x10	F	ZB2	T	-40	316	330	326	324			strain aged 5%, 60 min. at 250°C
945943	153945	CV 10x10	F	ZB2	T	-40	318	44	326	229			strain aged 5%, 60 min. at 250°C
947298	152734	CV 10x10	F	ZB2	T	-40	30	276	49	119			strain aged 5%, 60 min. at 250°C
947433	154869	CV 10x10	F	ZB2	T	-40	332	343	361	345			strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
753741	154894	F	OS	HV10	199	203	202
859285	151315	F	OS	HV10	204	206	203
859286	155458	F	OS	HV10	218	221	223
859727	154898	F	OS	HV10	203	199	204
859729	156206	F	OS	HV10	218	217	214
944915	156873	F	OS	HV10	211	218	215
944916	134244	F	OS	HV10	218	215	218
944917	152948	F	OS	HV10	243	235	241
945463	132752	F	OS	HV10	217	217	226
945943	153945	F	OS	HV10	210	212	207
947298	152734	F	OS	HV10	258	258	261
947433	156208	F	OS	HV10	216	211	218

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						416	416	416	25	25	25	35
753741	154894	Ø	9.94	F	S	579	578	579	82	78	83	81
	154932	Ø	6.00	F	S	615	612	615	81	81	84	82
859285	155008	Ø	10.02	F	S	603	603	601	81	81	83	82
859286	155012	Ø	10.01	F	S	599	598	598	82	81	82	82
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
	154936	Ø	6.00	F	S	602	607	605	85	83	82	83
859729	156193	Ø	10.00	F	S	595	595	595	83	79	80	81
	156206	Ø	5.97	F	S	636	635	636	82	82	85	83
944915	156873	Ø	9.94	F	S	573	574	579	83	83	83	83
944916	134244	Ø	9.99	F	S	586	585	586	84	84	83	84
945463	132752	Ø	10.00	F	S	578	579	578	84	81	82	83
945943	153945	Ø	9.98	F	S	597	599	598	82	80	80	81
947433	156208	Ø	10.00	F	S	609	609	609	85	83	82	83
Set values >=						400	400	400	25	25	25	35
944917	152948	Ø	9.97	F	S	537	537	536	83	86	83	84
947298	152734	Ø	9.98	F	S	596	601	598	78	63	74	71

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
753741	154894	.031	.329	1.620	.007	.0004	.032	.169	.170	.007	.175	.003	.036	.011	.0055	.0002	.0020	.0015	.0020	.0020
	154929	.031	.336	1.640	.007	.0004	.033	.170	.170	.007	.177	.003	.037	.012	.0053	.0002	.0020	.0015	.0020	.0020
	154932	.030	.335	1.620	.007	.0003	.033	.170	.170	.007	.171	.003	.035	.011	.0051	.0002	.0020	.0016	.0020	.0020
859285	151315	.037	.351	1.600	.006	.0009	.036	.189	.180	.009	.156	.003	.035	.012	.0052	.0003	.0020	.0022	.0020	.0020
859286	155457	.030	.346	1.680	.005	.0005	.039	.181	.180	.005	.162	.003	.036	.013	.0043	.0002	.0020	.0016	.0020	.0020
	155458	.029	.343	1.680	.006	.0005	.038	.180	.180	.005	.164	.003	.036	.013	.0042	.0002	.0020	.0016	.0020	.0020
859727	154866	.030	.348	1.620	.006	.0003	.035	.173	.180	.006	.169	.003	.035	.011	.0047	.0002	.0020	.0020	.0020	.0020
	154868	.030	.345	1.620	.006	.0003	.034	.171	.180	.006	.171	.003	.035	.011	.0050	.0002	.0020	.0019	.0020	.0020
	154888	.031	.344	1.610	.005	.0004	.033	.172	.180	.006	.173	.003	.035	.011	.0045	.0002	.0020	.0017	.0020	.0020
	154898	.030	.350	1.630	.006	.0003	.035	.171	.180	.006	.171	.003	.035	.012	.0051	.0002	.0020	.0017	.0020	.0020
	154937	.030	.347	1.620	.006	.0003	.035	.174	.180	.006	.171	.003	.034	.011	.0048	.0002	.0020	.0019	.0020	.0020
859729	154891	.032	.354	1.620	.006	.0009	.034	.178	.180	.007	.166	.004	.036	.010	.0042	.0003	.0030	.0017	.0020	.0020
	156193	.031	.362	1.630	.006	.0005	.034	.180	.180	.008	.165	.003	.035	.010	.0043	.0002	.0020	.0017	.0020	.0020
	156196	.034	.366	1.620	.006	.0003	.033	.177	.170	.007	.166	.003	.036	.011	.0040	.0002	.0020	.0017	.0020	.0020
	156206	.031	.356	1.640	.006	.0008	.035	.178	.180	.007	.169	.004	.037	.011	.0042	.0002	.0020	.0014	.0020	.0020
944915	156873	.028	.328	1.600	.006	.0004	.038	.184	.170	.010	.155	.003	.036	.012	.0049	.0002	.0020	.0019	.0020	.0020
944916	156172	.029	.341	1.600	.006	.0009	.036	.187	.170	.009	.157	.004	.034	.011	.0049	.0002	.0020	.0021	.0020	.0020
944917	152948	.032	.332	1.600	.006	.0011	.035	.188	.180	.008	.173	.004	.035	.012	.0051	.0003	.0020	.0020	.0020	.0020
945463	156782	.030	.332	1.590	.006	.0003	.032	.180	.170	.007	.162	.003	.035	.012	.0055	.0002	.0020	.0017	.0020	.0020
945943	153940	.031	.365	1.620	.006	.0005	.038	.185	.180	.017	.172	.004	.035	.012	.0049	.0002	.0020	.0015	.0020	.0020
	153945	.030	.372	1.630	.005	.0004	.039	.185	.180	.017	.171	.004	.036	.012	.0048	.0002	.0020	.0015	.0020	.0020
947298	152562	.059	.361	1.510	.007	.0006	.036	.173	.270	.008	.158	.002	.025	.012	.0048	.0002	.0020	.0021	.0020	.0020
	152734	.062	.367	1.530	.007	.0005	.037	.177	.270	.007	.160	.002	.026	.013	.0050	.0002	.0020	.0020	.0020	.0020
947433	154881	.036	.372	1.620	.006	.0003	.033	.171	.170	.007	.166	.003	.037	.012	.0038	.0002	.0020	.0016	.0020	.0020
	156208	.036	.369	1.610	.006	.0006	.033	.174	.170	.006	.165	.003	.037	.012	.0041	.0003	.0020	.0015	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
753741	154894	.0020	.0020	.36	.14	.039	.050	5.82
	154929	.0020	.0020	.36	.15	.040	.052	6.23
	154932	.0020	.0020	.36	.14	.038	.049	6.47
859285	151315	.0020	.0020	.37	.15	.038	.050	6.92
859286	155457	.0020	.0020	.37	.15	.039	.052	9.07
	155458	.0020	.0020	.37	.15	.039	.052	9.05
859727	154866	.0020	.0020	.36	.14	.038	.049	7.45
	154868	.0020	.0020	.36	.14	.038	.049	6.80
	154888	.0020	.0020	.36	.14	.038	.049	7.33
	154898	.0020	.0020	.36	.15	.038	.050	6.86
	154937	.0020	.0020	.36	.14	.037	.048	7.29
859729	154891	.0020	.0020	.36	.15	.040	.050	8.10
	156193	.0020	.0020	.36	.15	.038	.048	7.91
	156196	.0020	.0020	.36	.15	.039	.050	8.25
	156206	.0020	.0020	.37	.15	.041	.052	8.33
944915	156873	.0020	.0020	.36	.14	.039	.051	7.76
944916	156172	.0020	.0020	.36	.14	.038	.049	7.35
944917	152948	.0020	.0020	.36	.15	.039	.051	6.86
945463	156782	.0020	.0020	.36	.14	.038	.050	5.82
945943	153940	.0020	.0020	.37	.15	.039	.051	7.76
	153945	.0020	.0020	.37	.15	.040	.052	8.13
947298	152562	.0020	.0020	.38	.17	.027	.039	7.50
	152734	.0020	.0020	.38	.17	.028	.041	7.40
947433	154881	.0020	.0020	.36	.15	.040	.052	8.68
	156208	.0020	.0020	.36	.15	.040	.052	8.05

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 190:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 210:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 240:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 50, 60, 70, 80, 90, 100, 110, 130, 150, 170, 180, 190, 280, 290, 300, 310
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 210, 240
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

DNV
~~Witnessed~~ Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2023-03-06
Sign: Antonio R. Zambrano C.

This document has been digitally signed and will therefore not have handwritten signatures.

voestalpine
ONE STEP AHEAD.

72936

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396777**
Seite/Page 1/8
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
08	1	528858 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528859 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528860 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528861 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528862 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528863 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528865 1	57407	TM	25,00 x 2500,0 x 12000
08	1	528866 1	57407	TM	25,00 x 2500,0 x 12000
08	1	531370 1	02789	TM	25,00 x 2500,0 x 12000
Σ	9	Gewicht Weight (B12) 52.992 kg kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
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Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
02789	0,09	0,28	1,56	0,009	0,002	0,003	0,044	0,03	0,05	0,04
57407	0,09	0,31	1,59	0,012	0,001	0,003	0,036	0,02	0,04	0,04

Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
02789	0,002	0,015	0,039	0,0001	0,02	0,003	0,002	0,000	0,002	0,18
57407	0,003	0,015	0,045	0,0001	0,01	0,002	0,002	0,000	0,001	0,18

Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12				
02789	0,001	0,37	0,000	0,06	0,14	0,04				
57407	0,001	0,37	0,000	0,06	0,11	0,05				

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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Veckenstedter Weg 10
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(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
530553 *)	02789	0,09	0,28	1,60	0,007	0,001	0,002	0,040	0,04
528858	57407	0,09	0,33	1,55	0,014	0,001	0,005	0,039	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,050	Mo % ≤ 0,25	B % ≤ 0,0008	EV1 1) % ≤ 0,22
530553 *)	02789	0,05	0,04	0,003	0,019	0,047	0,02	0,0005	0,19
528858	57407	0,04	0,04	0,004	0,019	0,049	0,01	0,0003	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,41	EV3 3) %	EV4 4) % ≤ 0,13	Nb+V % ≤ 0,12
530553 *)	02789	0,38	0,15	0,07	0,05
528858	57407	0,36	0,11	0,07	0,05

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

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(A08)
Abnahme NV
Inspection **N142STU8**
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Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
528858	57407	K4G	Q	TM	P	531	626	0,85	23	
528858	57407	K4G	Q	TS	P	572	635	0,88	21	
528859	57407	K4G	Q	TM	P	509	597	0,84	24	
528859	57407	K4G	Q	TS	P	540	599	0,85	24	
528860	57407	K4G	Q	TM	P	518	614	0,84	23	
528860	57407	K4G	Q	TS	P	550	603	0,85	24	
528861	57407	K4G	Q	TM	P	507	609	0,83	25	
528861	57407	K4G	Q	TS	P	511	601	0,85	24	
528862	57407	K4G	Q	TM	P	512	612	0,84	24	
528862	57407	K4G	Q	TS	P	560	609	0,85	23	
528863	57407	K4G	Q	TM	P	507	606	0,83	24	
528863	57407	K4G	Q	TS	P	503	598	0,84	22	
528865	57407	K4G	Q	TM	P	523	623	0,84	17	
528865	57407	K4G	Q	TS	P	530	606	0,86	23	
528866	57407	K4G	Q	TM	P	542	621	0,85	23	
528866	57407	K4G	Q	TS	P	550	614	0,85	25	
531370	02789	K4G	Q	TM	P	506	592	0,84	25	
531370	02789	K4G	Q	TS	P	525	587	0,85	26	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: $L_o = 5{,}65\sqrt{S_o}$

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
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Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)
				% ≥ 25			% ≥ 35
528858	57407	K4	TM	66	71	68	68
530553 *)	02789	K4	TM	61	74	62	66

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3
				MPa ≥ 416		
528858	57407	K4	TM	619	611	616
530553 *)	02789	K4	TM	617	619	615

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
528858	57407	K4O	Q	A5	KV600	-040	106	91	100	99
528858	57407	K4O	Q	TM	KV600	-040	232	233	217	227
528858	57407	K4O	Q	TS	KV600	-040	203	208	220	210
528862	57407	K4O	Q	TM	KV600	-040	217	152	145	171
528862	57407	K4O	Q	TS	KV600	-040	237	215	206	219
530553 *)	02789	K4O	Q	A5	KV600	-040	216	226	228	223
530553 *)	02789	K4O	Q	TM	KV600	-040	197	214	204	205
530553 *)	02789	K4O	Q	TS	KV600	-040	224	267	219	237
531231 *)	02789	K4O	Q	TM	KV600	-040	195	191	193	193
531231 *)	02789	K4O	Q	TS	KV600	-040	236	267	274	259

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
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(Z01)
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Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
528858	57407	K4		TM	194			
530553 *)	02789	K4		TM	193			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
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Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special
consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396777**
Seite/Page 8/8
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

72984

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396763**
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Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
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Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
05	1	530313 1	57407	TM	20,00 x 2500,0 x 12000
05	1	530313 2	57407	TM	20,00 x 2500,0 x 12000
05	1	530314 1	57407	TM	20,00 x 2500,0 x 12000
05	1	530315 1	57407	TM	20,00 x 2500,0 x 12000
05	1	530315 2	57407	TM	20,00 x 2500,0 x 12000
05	1	530316 1	57407	TM	20,00 x 2500,0 x 12000
05	1	530316 2	57407	TM	20,00 x 2500,0 x 12000
05	1	531368 1	02789	TM	20,00 x 2500,0 x 12000
05	1	531368 2	02789	TM	20,00 x 2500,0 x 12000
Σ	9	Gewicht Weight (B12) 42.390 kg kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
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Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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Nr./No. (A03) **1396763**
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(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,14	≤ 0,55	≤ 1,70	≤ 0,020	≤ 0,005	≤ 0,010	0,015–0,055	≤ 0,30	≤ 0,25	≤ 0,70
02789	0,09	0,28	1,56	0,009	0,002	0,003	0,044	0,03	0,05	0,04
57407	0,09	0,31	1,59	0,012	0,001	0,003	0,036	0,02	0,04	0,04

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,08	≤ 0,025	≤ 0,050	≤ 0,0008	≤ 0,25	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,22
02789	0,002	0,015	0,039	0,0001	0,02	0,003	0,002	0,000	0,002	0,18
57407	0,003	0,015	0,045	0,0001	0,01	0,002	0,002	0,000	0,001	0,18

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤ 0,010	≤ 0,41	≤ 0,010	≤ 0,13		≤ 0,12
02789	0,001	0,37	0,000	0,06	0,14	0,04
57407	0,001	0,37	0,000	0,06	0,11	0,05

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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Trademark
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D-38871 Ilsenburg
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ILSENBURGER GROBBLECH
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Abnahmeprüfzeugnis 3.2
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
530553 *)	02789	0,09	0,28	1,60	0,007	0,001	0,002	0,040	0,04
528858 *)	57407	0,09	0,33	1,55	0,014	0,001	0,005	0,039	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,050	Mo % ≤ 0,25	B % ≤ 0,0008	EV1 1) % ≤ 0,22
530553 *)	02789	0,05	0,04	0,003	0,019	0,047	0,02	0,0005	0,19
528858 *)	57407	0,04	0,04	0,004	0,019	0,049	0,01	0,0003	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,41	EV3 3) %	EV4 4) % ≤ 0,13	Nb+V % ≤ 0,12
530553 *)	02789	0,38	0,15	0,07	0,05
528858 *)	57407	0,36	0,11	0,07	0,05

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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ILSENBURGER GROBBLECH
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Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1396763**
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Erzeugnis Grobblech
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(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
530313	57407	K4G	Q	TM	P	554	644	0,86	22	
530313	57407	K4G	Q	TS	P	569	644	0,88	22	
530314	57407	K4G	Q	TM	P	550	646	0,85	23	
530314	57407	K4G	Q	TS	P	549	641	0,86	23	
530315	57407	K4G	Q	TM	P	547	645	0,85	20	
530315	57407	K4G	Q	TS	P	538	633	0,85	23	
530316	57407	K4G	Q	TM	P	565	667	0,85	21	
530316	57407	K4G	Q	TS	P	565	654	0,86	22	
531368	02789	K4G	Q	TM	P	539	626	0,86	23	
531368	02789	K4G	Q	TS	P	566	616	0,86	23	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

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Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥ 25	2	3	MW 4) % ≥ 35	
528858 *)	57407	K4	TM	66	71	68	68	
529550 *)	57407	K4	TM	63	68	36	56	
531368	02789	K4	TM	71	72	74	72	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥ 416	2	3		
528858 *)	57407	K4	TM	619	611	616		
529550 *)	57407	K4	TM	588	548	427		
531368	02789	K4	TM	632	629	630		

1) K : Kopf / Top
2) 4 : 1/4 Breite / 1/4 Width
3) TM : thermomechanisch gewalzt / thermomechanically rolled
4) MW : Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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ILSENBURGER GROBBLECH
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Abnahmeprüfzeugnis 3.2
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Nr./No. (A03) **1396763**
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
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Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
528858 *)	57407	K4O	Q	A5	KV600	-040	106	91	100	99
528858 *)	57407	K4O	Q	TM	KV600	-040	232	233	217	227
528858 *)	57407	K4O	Q	TS	KV600	-040	203	208	220	210
529550 *)	57407	K4O	Q	A5	KV600	-040	111	102	110	108
529550 *)	57407	K4O	Q	TM	KV600	-040	233	117	217	189
529550 *)	57407	K4O	Q	TS	KV600	-040	100	125	105	110
530313	57407	K4O	Q	TM	KV600	-040	239	137	196	191
530313	57407	K4O	Q	TS	KV600	-040	214	232	208	218
530314	57407	K4O	Q	TM	KV600	-040	216	158	159	178
530314	57407	K4O	Q	TS	KV600	-040	181	202	185	189
531368	02789	K4O	Q	A5	KV600	-040	200	116	205	174
531368	02789	K4O	Q	TM	KV600	-040	232	243	240	238
531368	02789	K4O	Q	TS	KV600	-040	167	123	144	145

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
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Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
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(A04)

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Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396763**
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Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
528858 *)	57407	K4		TM	194			
529550 *)	57407	K4		TM	188			
531368	02789	K4		TM	196			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special
consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
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Inspection Representative
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Cyron

ILSENBURGER GROBBLECH
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
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(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

72941

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

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Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396652**
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Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6904
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
08	1	529799 1	57380	TM	25,00 x 2500,0 x 12000
08	1	529800 1	57380	TM	25,00 x 2500,0 x 12000
08	1	532127 1	57380	TM	25,00 x 2500,0 x 12000
Σ	3	Gewicht Weight (B12) 17.664 kg kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

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DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
57380	0,09	0,27	1,60	0,009	0,001	0,005	0,041	0,01	0,03	0,03
Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
57380	0,002	0,017	0,042	0,0002	0,002	0,002	0,001	0,000	0,002	0,18
Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12				
57380	0,000	0,37	0,000	0,06	0,07	0,04				

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
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QM-System: Certification as per ISO 9001 since 28 February 1990

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Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
529800	57380	0,10	0,28	1,63	0,011	0,000	0,006	0,041	0,01
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
529800	57380	0,02	0,03	0,002	0,018	0,048	0,003	0,0005	0,20
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12				
529800	57380	0,38	0,06	0,07	0,05				

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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ILSENBURGER GROBBLECH
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Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
529799	57380	K4G	Q	TM	P	513	610	0,84	23	
529799	57380	K4G	Q	TS	P	535	607	0,86	24	
529800	57380	K4G	Q	TM	P	516	620	0,83	22	
529800	57380	K4G	Q	TS	P	531	615	0,85	22	
532127	57380	K4G	Q	TM	P	485	596	0,81	26	
532127	57380	K4G	Q	TS	P	523	592	0,84	26	

1) K : Kopf / Top
2) 4 : 1/4 Breite / 1/4 Width
3) G : Erzeugnisdicke / Thickness of product
4) Q : quer / transversal
5) TM : thermomechanisch gewalzt / thermomechanically rolled
TS : simulierte Wärmebehandlung / simulated heat treatment
6) P : prismatisch / prismatic
7) A5 : Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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(B01)

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DIN EN 10029 B 02/11
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S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)	
				% ≥ 25			% ≥ 35	
529800	57380	K4	TM	70	71	73	71	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				MPa ≥ 416				
529800	57380	K4	TM	596	598	601		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
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S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
529800	57380	K4O	Q	A5	KV600	-040	94	61	37	64
529800	57380	K4O	Q	TM	KV600	-040	173	198	147	173
529800	57380	K4O	Q	TS	KV600	-040	159	214	135	169

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
529800	57380	K4		TM	194			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
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DIN EN 10204
(A02)

Nr./No. (A03) **1396652**
Seite/Page 7/8
Datum/Date 04.01.2024

Nr. (A07) Order 6904 21.09.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6904
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special
consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396652**
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Customer 4780 AA MOERDIJK
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

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SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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D-38871 Ilsenburg
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Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

72989

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396780**
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Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
09	1	531133 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531134 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531135 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531136 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531137 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531138 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531231 1	02789	TM	25,00 x 3000,0 x 12000
09	1	531232 1	02789	TM	25,00 x 3000,0 x 12000
Σ	8	Gewicht Weight (B12) 56.520 kg kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
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AJ Abnahmestempel
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ILSENBURGER GROBBLECH
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Nr. (A07) Order 6910
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Customer 4780 AA MOERDIJK
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142STU8**
(A05)

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
02789	0,09	0,28	1,56	0,009	0,002	0,003	0,044	0,03	0,05	0,04
Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
02789	0,002	0,015	0,039	0,0001	0,02	0,003	0,002	0,000	0,002	0,18
Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12				
02789	0,001	0,37	0,000	0,06	0,14	0,04				

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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Trademark
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Veckenstedter Weg 10
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Werksauftrags-Nr. 0000116550
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Lieferschein-Nr. 0091167636
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Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142STU8**
(A05)

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
530553 *)	02789	0,09	0,28	1,60	0,007	0,001	0,002	0,040	0,04
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
530553 *)	02789	0,05	0,04	0,003	0,019	0,047	0,02	0,0005	0,19
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12				
530553 *)	02789	0,38	0,15	0,07	0,05				

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
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Veckenstedter Weg 10
D-38871 Ilsenburg
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ILSENBURGER GROBBLECH
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Abnahmeprüfzeugnis 3.2
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Werksauftrags-Nr. 0000116550
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(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142STU8**
(A05)

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
531133	02789	K4G	Q	TM	P	494	596	0,83	23	
531133	02789	K4G	Q	TS	P	526	596	0,85	23	
531134	02789	K4G	Q	TM	P	520	617	0,84	23	
531134	02789	K4G	Q	TS	P	521	614	0,85	22	
531135	02789	K4G	Q	TM	P	514	621	0,83	24	
531135	02789	K4G	Q	TS	P	534	619	0,86	22	
531136	02789	K4G	Q	TM	P	516	624	0,83	22	
531136	02789	K4G	Q	TS	P	512	609	0,84	23	
531137	02789	K4G	Q	TM	P	510	613	0,83	24	
531137	02789	K4G	Q	TS	P	501	601	0,83	23	
531138	02789	K4G	Q	TM	P	513	621	0,83	24	
531138	02789	K4G	Q	TS	P	535	615	0,85	21	
531231	02789	K4G	Q	TM	P	536	634	0,85	21	
531231	02789	K4G	Q	TS	P	561	625	0,87	24	
531232	02789	K4G	Q	TM	P	495	603	0,82	22	
531232	02789	K4G	Q	TS	P	516	606	0,84	23	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
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ILSENBURGER GROBBLECH
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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
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DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142STU8**
(A05)

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4) % ≥ 35	
				% ≥ 25				
530553 *)	02789	K4	TM	61	74	62	66	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				MPa ≥ 416				
530553 *)	02789	K4	TM	617	619	615		

1) K : Kopf / Top
2) 4 : 1/4 Breite / 1/4 Width
3) TM : thermomechanisch gewalzt / thermomechanically rolled
4) MW : Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

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(A01)

AJ Abnahmestempel
Inspection Stamp
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(Z02)

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ILSENBURGER GROBBLECH
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Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
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DIN EN 10029 B 02/11
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S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
530553 *)	02789	K4O	Q	A5	KV600	-040	216	226	228	223
530553 *)	02789	K4O	Q	TM	KV600	-040	197	214	204	205
530553 *)	02789	K4O	Q	TS	KV600	-040	224	267	219	237
531134	02789	K4O	Q	TM	KV600	-040	201	212	197	203
531134	02789	K4O	Q	TS	KV600	-040	163	227	222	204
531231	02789	K4O	Q	TM	KV600	-040	195	191	193	193
531231	02789	K4O	Q	TS	KV600	-040	236	267	274	259

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396780**
Seite/Page 7/8
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
530553 *)	02789	K4		TM	193			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special
consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

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Herstellerzeichen
Trademark
(A04)

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D-38871 Ilsenburg
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Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

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Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396780**
Seite/Page 8/8
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Lieferschein-Nr. 0091167636
Dispatch note No. 03.01.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142STU8**
(A05)

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

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Herstellerzeichen
Trademark
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Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4EG-2

Z02 Date 15-06-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0376299/A**	**A08 Order-No.:**	**3500498**	**A07 OrderDat.**	14-04-2023	**Date of dispatch**	13-06-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6874

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
756784	182258/1	10	30,00	2500,0	12000	1		7.148	84133	S460MLOVAS
756784	182260/1	10	30,00	2500,0	12000	1		7.150	84133	S460MLOVAS
756784	182261/1	10	30,00	2500,0	12000	1		7.154	84135	S460MLOVAS
756784	182262/1	10	30,00	2500,0	12000	1		7.151	84133	S460MLOVAS
756784	182263/1	10	30,00	2500,0	12000	1		7.150	84133	S460MLOVAS
756784	184776/1	10	30,00	2500,0	12000	1		7.140	84133	S460MLOVAS
756784	184777/1	10	30,00	2500,0	12000	1		7.149	84133	S460MLOVAS
756792	182264/1	10	30,00	2500,0	12000	1		7.151	84133	S460MLOVAS
756792	182265/1	10	30,00	2500,0	12000	1		7.147	84135	S460MLOVAS
859286	184496/1	10	30,00	2500,0	12000	1		7.150	84134	S460MLOVAS
859599	180519/1	40	55,00	3000,0	12000	1		15.887	84135	S460MLOVAS
863028	181860/1	20	30,00	3050,0	12000	1		8.743	84135	S460MLOVAS

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Surveyor

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
863028	181861/1	20	30,00	3050,0	12000	1		8.743	84135	S460MLOVAS
863028	181862/1	20	30,00	3050,0	12000	1		8.743	84135	S460MLOVAS
863028	181863/1	20	30,00	3050,0	12000	1		8.746	84135	S460MLOVAS
947298	178350/1	30	55,00	2500,0	12000	1		13.257	84135	S460MLOVAS
950240	180521/1	60	100,00	2500,0	8000	1		15.982	84169	S460MLOVAS
950240	180603/1	70	100,00	2500,0	10000	1		19.940	84169	S460MLOVAS
950240	180604/1	80	100,00	3000,0	8500	1		20.408	84169	S460MLOVAS
950240	180605/1	50	100,00	2051,0	12000	1		19.730	84135	S460MLOVAS
950240	180606/1	50	100,00	2051,0	12000	1		19.730	84135	S460MLOVAS
		Sum				**21**		**231.399**		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
756784	.030	.349	1.640	.007	.0005	.039	.185	.180	.007	.157	.004	.036	.011	.0069	.0002	.0020	.0029	.0020	.0020	.0020	.37
756792	.030	.332	1.630	.006	.0003	.038	.181	.170	.007	.165	.004	.036	.012	.0058	.0002	.0020	.0012	.0020	.0020	.0020	.36
859286	.029	.358	1.700	.006	.0005	.038	.187	.180	.005	.162	.004	.037	.013	.0048	.0002	.0020	.0019	.0020	.0020	.0020	.37
859599	.063	.375	1.560	.008	.0004	.043	.189	.270	.005	.159	.003	.026	.013	.0051	.0002	.0020	.0016	.0020	.0020	.0020	.39
863028	.033	.309	1.600	.007	.0006	.039	.162	.170	.004	.168	.003	.037	.013	.0044	.0002	.0020	.0008	.0020	.0020	.0020	.36
947298	.063	.373	1.550	.007	.0006	.037	.176	.270	.008	.159	.003	.027	.013	.0052	.0002	.0020	.0019	.0020	.0020	.0020	.39
950240	.055	.187	1.500	.006	.0010	.035	.169	.520	.113	.033	.005	.027	.013	.0049	.0002	.0020	.0007	.0020	.0020	.0020	.40

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
756784	.15	.040	.051	5.65
756792	.14	.040	.052	6.55
859286	.15	.041	.054	7.92
859599	.18	.029	.042	8.43
863028	.14	.040	.053	8.86
947298	.18	.030	.043	7.12
950240	.16	.032	.045	7.14

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							420	520		17.0			
Set values <=								700			93.00		
756784	182261	30,0	30.12	F	O	T	519	590	A5	23.2	88.09		
	184776	30,0	30.19	F	O	T	531	595	A5	23.8	89.19		
756792	182265	30,0	30.30	F	O	T	534	589	A5	24.0	90.60		
859286	155002	30,0	30.25	F	O	T	543	608	A5	22.0	89.31		
863028	181861	30,0	30.42	F	O	T	523	586	A5	24.8	89.27		
>=							415	500		17.0			
Set values <=								675			93.00		
859599	180519	Ø	10.02	F	V	T	470	617	A5	23.6	76.15		
	180519	Ø	10.02	F	V	T	527	611	A5	26.4	86.38	001	1
947298	152560	Ø	10.00	F	V	T	498	641	A5	24.5	77.62		
	152560	Ø	10.03	F	V	T	464	572	A5	26.7	81.14	001	1
>=							400	500		17.0			
Set values <=								675			93.00		
950240	180521	Ø	9.99	F	V	T	422	566	A5	28.9	74.56		
	180603	Ø	10.02	F	V	T	410	562	A5	29.5	72.94		
	180605	Ø	10.01	F	V	T	419	558	A5	28.3	75.02		
	180521	Ø	10.01	F	V	T	477	570	A5	27.4	83.70	001	1
	180603	Ø	10.01	F	V	T	468	561	A5	28.7	83.45	001	1
	180605	Ø	10.02	F	V	T	466	560	A5	27.6	83.29	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
756784	182261	CV 10x10	F	ZB2	T	-40	302	304	297	301			strain aged 5%, 60 min. at 250°C
756792	182265	CV 10x10	F	ZB2	T	-40	333	324	331	329			strain aged 5%, 60 min. at 250°C
859286	155005	CV 10x10	F	ZB2	T	-40	326	324	347	332			strain aged 5%, 60 min. at 250°C
859599	153043	CV 10x10	F	ZB2	T	-40	68	174	75	106			strain aged 5%, 60 min. at 250°C
863028	181861	CV 10x10	F	ZB2	T	-40	327	316	324	322			strain aged 5%, 60 min. at 250°C
947298	152734	CV 10x10	F	ZB2	T	-40	30	276	49	119			strain aged 5%, 60 min. at 250°C
950240	180521	CV 10x10	F	ZB2	T	-40	299	318	249	289			strain aged 5%, 60 min. at 250°C
>=						-40	42	42	42	60			
Set values <=													
756784	182261	CV 10x10	F	O	T	-40	333	347	338	340			
	184776	CV 10x10	F	O	T	-40	334	356	361	351			
756792	182265	CV 10x10	F	O	T	-40	352	373	352	359			
859286	155002	CV 10x10	F	O	T	-40	353	347	362	354			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
859599	180519	CV 10x10	F	O	T	-40	227	273	258	252			
	180519	CV 10x10	F	O	T	-40	223	209	225	219	001	1	
	180519	CV 10x10	F	K	T	-40	71	59	73	67			
	180519	CV 10x10	F	K	T	-40	66	64	65	65	001	1	
863028	181861	CV 10x10	F	O	T	-40	342	332	332	336			
947298	152560	CV 10x10	F	O	T	-40	299	289	279	289			
	152560	CV 10x10	F	O	T	-40	273	255	196	241	001	1	
	152560	CV 10x10	F	K	T	-40	258	240	296	264			
	152560	CV 10x10	F	K	T	-40	260	266	280	269	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
950240	180521	CV 10x10	F	O	T	-40	312	288	273	291			
	180603	CV 10x10	F	O	T	-40	326	319	283	309			
	180605	CV 10x10	F	O	T	-40	301	269	270	280			
	180521	CV 10x10	F	O	T	-40	231	236	248	238	001	1	
	180603	CV 10x10	F	O	T	-40	224	254	269	249	001	1	
	180605	CV 10x10	F	O	T	-40	222	261	242	242	001	1	
	180521	CV 10x10	F	K	T	-40	343	313	253	303			
	180603	CV 10x10	F	K	T	-40	60	257	257	191			
	180605	CV 10x10	F	K	T	-40	109	205	249	188			
	180521	CV 10x10	F	K	T	-40	43	183	237	154	001	1	
	180603	CV 10x10	F	K	T	-40	126	270	76	158	001	1	
	180605	CV 10x10	F	K	T	-40	219	228	106	184	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
756784	182261	F	OS	HV10	199	198	202
756792	182265	F	OS	HV10	202	205	204
859286	155458	F	OS	HV10	218	221	223
859599	153043	F	OS	HV10	257	254	257
863028	181861	F	OS	HV10	201	201	203
947298	152734	F	OS	HV10	258	258	261
950240	180521	F	OS	HV10	220	217	223

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
756784	182261	Ø	9.99	F	S	576	578	578	82	82	81	82
756792	182265	Ø	9.99	F	S	576	578	577	77	81	82	80
859286	155012	Ø	10.01	F	S	599	598	598	82	81	82	82
863028	181861	Ø	9.98	F	S	583	582	583	80	82	80	81
>=						400	400	400	25	25	25	35
Set values <=												
859599	153043	Ø	9.96	F	S	582	585	586	80	76	74	76
947298	152734	Ø	9.98	F	S	596	601	598	78	63	74	71
950240	180521	Ø	9.99	F	S	569	571	565	67	68	70	68

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
756784	182261	.030	.350	1.620	.006	.0009	.036	.184	.180	.005	.158	.004	.036	.011	.0070	.0003	.0020	.0025	.0020	.0020
	184776	.031	.351	1.620	.007	.0007	.037	.186	.180	.007	.158	.004	.036	.010	.0067	.0002	.0020	.0029	.0020	.0020
756792	180676	.030	.318	1.610	.006	.0004	.038	.171	.170	.006	.165	.003	.036	.011	.0054	.0002	.0020	.0011	.0020	.0020
859286	184496	.030	.341	1.680	.005	.0006	.037	.181	.180	.004	.164	.003	.036	.013	.0051	.0003	.0020	.0016	.0020	.0020
859599	152563	.060	.365	1.520	.008	.0004	.041	.181	.270	.006	.159	.003	.025	.012	.0052	.0002	.0020	.0019	.0020	.0020
863028	181861	.032	.319	1.610	.007	.0003	.041	.173	.170	.006	.165	.003	.036	.012	.0039	.0002	.0020	.0010	.0020	.0020
947298	159826	.059	.366	1.530	.007	.0005	.036	.172	.270	.008	.159	.003	.026	.013	.0048	.0002	.0020	.0019	.0020	.0020
950240	180521	.055	.187	1.540	.006	.0009	.038	.167	.520	.113	.033	.004	.026	.013	.0046	.0002	.0020	.0009	.0020	.0020
	180603	.033	.187	1.603	.007	.0010	.033	.181	.480	.118	.028	.030	.028	.004	.0058	.0003	.0020	.0015	.0020	.0020
	180605	.053	.186	1.540	.006	.0010	.037	.168	.510	.112	.033	.005	.026	.012	.0041	.0002	.0020	.0009	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
756784	182261	.0020	.0020	.36	.15	.040	.051	5.14
	184776	.0020	.0020	.36	.15	.040	.050	5.52
756792	180676	.0020	.0020	.36	.14	.039	.050	7.04
859286	184496	.0020	.0020	.37	.15	.039	.052	7.25
859599	152563	.0020	.0020	.38	.17	.028	.040	7.88
863028	181861	.0020	.0020	.36	.14	.039	.051	10.51
947298	159826	.0020	.0020	.38	.17	.029	.042	7.50
950240	180521	.0020	.0020	.41	.17	.030	.043	8.26
	180603	.0020	.0020	.40	.15	.058	.062	5.69
	180605	.0020	.0020	.40	.16	.031	.043	9.02

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 30:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 40:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 50:

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Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 60:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 70:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 80:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 30, 40
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 50, 60, 70, 80
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 100 mm, Edge zone transverse 100 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4EN-4

Z02 Date 04-09-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376909/A	A08 Order-No.:	3500738	A07 OrderDat.	08-06-2023

Date of dispatch 31-08-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo.
6884

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
752354	190821/1	110	80,00	2051,0	12000	1		15.769	86584	S460MLOVAS
754582	195706/1	10	30,00	2500,0	12000	1		7.146	86584	S460MLOVAS
756276	191219/1	50	50,00	3000,0	12000	1		14.440	86584	S460MLOVAS
756276	191220/1	50	50,00	3000,0	12000	1		14.431	86584	S460MLOVAS
756276	195705/1	10	30,00	2500,0	12000	1		7.142	86584	S460MLOVAS
756875	195702/1	10	30,00	2500,0	12000	1		7.142	86584	S460MLOVAS
756875	195703/1	10	30,00	2500,0	12000	1		7.144	86584	S460MLOVAS
756875	195704/1	10	30,00	2500,0	12000	1		7.145	86584	S460MLOVAS
757417	190833/1	60	60,00	2500,0	12000	1		14.456	86584	S460MLOVAS
757417	190834/1	60	60,00	2500,0	12000	1		14.462	86584	S460MLOVAS
757417	194082/1	70	60,00	3000,0	12000	1		17.311	86584	S460MLOVAS
757417	194083/1	80	60,00	3050,0	12000	1		17.548	86584	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
757417	194084/1	70	60,00	3000,0	12000	1		17.311	86584	S460MLOVAS
860447	194379/1	60	60,00	2500,0	12000	1		14.451	86584	S460MLOVAS
863391	195701/1	30	30,00	2810,0	16000	1		10.740	86584	S460MLOVAS
864105	190825/1	110	80,00	2051,0	12000	1		15.808	86584	S460MLOVAS
864105	191783/1	120	80,00	2500,0	12000	1		19.244	86584	S460MLOVAS
864105	191785/1	130	80,00	3000,0	10500	1		20.193	86584	S460MLOVAS
864105	194358/1	120	80,00	2500,0	12000	1		19.263	86584	S460MLOVAS
864105	194359/1	130	80,00	3000,0	10500	1		20.149	86584	S460MLOVAS
948259	195707/1	10	30,00	2500,0	12000	1		7.145	86584	S460MLOVAS
950779	190819/1	110	80,00	2051,0	12000	1		15.808	86584	S460MLOVAS
951251	195697/1	30	30,00	3050,0	16000	1		11.687	86584	S460MLOVAS
951251	195699/1	30	30,00	3050,0	16000	1		11.684	86584	S460MLOVAS
951324	190829/1	60	60,00	2500,0	9130	1		10.894	86584	S460MLOVAS
951324	194085/1	80	60,00	3050,0	12000	1		17.627	86584	S460MLOVAS
951324	194086/1	80	60,00	3050,0	12000	1		17.598	86584	S460MLOVAS
951324	194365	90	60,00	3250,0	13000	1		20.305	86584	S460MLOVAS
951324	194366/1	100	60,00	3500,0	12000	1		20.144	86584	S460MLOVAS
952379	194402/1	40	40,00	2500,0	12000	1		9.562	86584	S460MLOVAS
952379	194403/1	40	40,00	2500,0	12000	1		9.583	86584	S460MLOVAS
952379	194404/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194405/1	40	40,00	2500,0	12000	1		9.581	86584	S460MLOVAS
952379	194406/1	40	40,00	2500,0	12000	1		9.586	86584	S460MLOVAS
952379	194407/1	40	40,00	2500,0	12000	1		9.585	86584	S460MLOVAS
952379	194408/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194409/1	40	40,00	2500,0	12000	1		9.582	86584	S460MLOVAS
952379	194410/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194411/1	40	40,00	2500,0	12000	1		9.584	86584	S460MLOVAS
952379	194420/1	20	30,00	2500,0	16000	1		9.591	86584	S460MLOVAS
952379	194421/1	20	30,00	2450,0	16000	1		9.367	86584	S460MLOVAS
952379	194422/1	20	30,00	2500,0	16000	1		9.583	86584	S460MLOVAS
	Sum					**42**		**538.474**		

B14 - Supplementary information

width-deviation for plate(s) 194421/1, 195701/1: Customer accepted the deviation.

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.

length-deviation for plate(s) 190829/1: Customer accepted the deviation.

B14 - Supplementary information

Dimensional tolerances acc. EN 10029/11
Flatness acc. EN 10029/11 class N
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
752354	.051	.176	1.490	.005	.0006	.031	.155	.570	.119	.033	.003	.027	.013	.0040	.0002	.0020	.0006	.0020	.0020	.0020	.39
754582	.027	.342	1.610	.006	.0006	.039	.174	.170	.009	.192	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020	.0020	.36
756276	.030	.328	1.610	.006	.0003	.048	.172	.170	.005	.162	.003	.036	.013	.0049	.0002	.0020	.0012	.0020	.0020	.0020	.36
756875	.035	.358	1.640	.006	.0003	.046	.176	.170	.010	.165	.004	.037	.013	.0064	.0003	.0020	.0020	.0020	.0020	.0020	.37
757417	.065	.392	1.540	.008	.0006	.031	.182	.260	.012	.158	.005	.028	.012	.0059	.0002	.0020	.0011	.0020	.0020	.0020	.39
860447	.058	.395	1.540	.008	.0004	.037	.175	.280	.019	.164	.004	.026	.011	.0053	.0002	.0020	.0031	.0020	.0020	.0020	.38
863391	.037	.347	1.630	.005	.0006	.050	.181	.170	.006	.159	.005	.036	.011	.0049	.0002	.0020	.0022	.0020	.0020	.0020	.37
864105	.056	.189	1.520	.008	.0009	.029	.176	.520	.121	.015	.005	.029	.014	.0054	.0002	.0020	.0010	.0020	.0020	.0020	.41
948259	.037	.326	1.620	.006	.0003	.039	.172	.170	.007	.162	.003	.033	.011	.0057	.0002	.0020	.0018	.0020	.0020	.0020	.37
950779	.049	.173	1.530	.006	.0007	.028	.177	.500	.100	.010	.003	.026	.012	.0053	.0002	.0020	.0008	.0020	.0020	.0020	.39
951251	.030	.364	1.630	.008	.0005	.039	.182	.180	.006	.163	.005	.037	.011	.0050	.0002	.0020	.0016	.0020	.0020	.0020	.36
951324	.060	.374	1.540	.007	.0008	.039	.174	.270	.013	.154	.004	.026	.010	.0060	.0002	.0020	.0022	.0020	.0020	.0020	.38
952379	.032	.321	1.620	.006	.0007	.042	.177	.170	.006	.157	.004	.035	.012	.0062	.0002	.0020	.0017	.0030	.0020	.0020	.36

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
752354	.16	.030	.043	7.75
754582	.14	.039	.050	7.96
756276	.14	.039	.052	9.80
756875	.15	.041	.054	7.19
757417	.18	.033	.045	5.25
860447	.17	.030	.041	6.98
863391	.15	.041	.052	10.20
864105	.17	.034	.048	5.37
948259	.15	.036	.047	6.84
950779	.16	.029	.041	5.28
951251	.15	.042	.053	7.80
951324	.17	.030	.040	6.50
952379	.15	.039	.051	6.77

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							420	520		17.0			
Set values <=								700			93.00		
754582	195706	30,0	30.31	F	O	T	538	591	A5	24.1	91.00		
756276	195705	30,0	30.62	F	O	T	534	581	A5	25.9	91.94		
756875	195702	30,0	30.39	F	O	T	536	604	A5	21.5	88.69		
863391	195701	30,0	30.68	F	O	T	556	615	A5	23.8	90.40		
948259	195707	30,0	30.40	F	O	T	510	584	A5	22.7	87.25		
951251	195699	30,0	30.47	F	O	T	541	602	A5	23.2	89.86		
952379	194403	30,0	40.92	F	O	T	517	608	A5	23.2	85.13		
	194406	30,0	40.61	F	O	T	449	582	A5	24.4	77.15		
	194407	30,0	40.79	F	O	T	510	596	A5	22.8	85.60		
	194408	30,0	41.00	F	O	T	509	603	A5	22.4	84.44		
	194422	30,0	30.49	F	O	T	522	581	A5	23.7	89.80		
>=							415	500		17.0			
Set values <=								675			93.00		
756276	191220	Ø	10.02	F	V	T	466	573	A5	27.0	81.31		
	191220	Ø	9.99	F	V	T	545	615	A5	26.2	88.65	001	1
757417	190834	Ø	10.02	F	V	T	438	599	A5	28.1	73.03		
	194083	Ø	9.97	F	V	T	461	583	A5	25.1	78.95		
	194084	Ø	10.00	F	V	T	419	581	A5	28.4	72.18		
	190834	Ø	9.99	F	V	T	485	587	A5	28.6	82.70	001	1
	194083	Ø	10.00	F	V	T	484	583	A5	25.9	83.05	001	1
	194084	Ø	10.02	F	V	T	475	576	A5	25.6	82.55	001	1
860447	171382	Ø	10.03	F	V	T	432	588	A5	27.3	73.54		
	171382	Ø	10.01	F	V	T	482	577	A5	28.3	83.48	001	1
951324	190831	Ø	10.02	F	V	T	447	601	A5	26.6	74.30		
	194085	Ø	10.04	F	V	T	475	622	A5	26.5	76.38		
	194365	Ø	10.03	F	V	T	436	615	A5	30.4	71.02		
	194366	Ø	10.03	F	V	T	441	591	A5	26.8	74.65		
	190831	Ø	9.98	F	V	T	490	587	A5	26.2	83.40	001	1
	194085	Ø	10.01	F	V	T	460	564	A5	28.9	81.55	001	1
	194365	Ø	9.97	F	V	T	511	598	A5	27.6	85.44	001	1
	194366	Ø	10.01	F	V	T	488	577	A5	27.9	84.47	001	1
>=							405	500		17.0			

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							405	500		17.0			
Set values <=								675			93.00		
752354	190821	Ø	10.00	F	V	T	439	583	A5	27.0	75.37		
	190821	Ø	9.99	F	V	T	488	584	A5	24.8	83.46	001	1
864105	191783	Ø	10.03	F	V	T	428	573	A5	28.9	74.63		
	191785	Ø	10.03	F	V	T	449	587	A5	26.5	76.51		
	194359	Ø	10.02	F	V	T	440	580	A5	26.9	75.88		
	191783	Ø	9.97	F	V	T	560	634	A5	26.0	88.28	001	1
	191785	Ø	10.03	F	V	T	517	599	A5	29.4	86.28	001	1
	194359	Ø	10.01	F	V	T	489	580	A5	27.2	84.24	001	1
950779	190819	Ø	9.99	F	V	T	435	578	A5	29.2	75.30		
	190819	Ø	9.98	F	V	T	492	588	A5	25.2	83.66	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
752354	190821	CV 10x10	F	O	T	-40	300	349	355	335			
	190821	CV 10x10	F	O	T	-40	318	287	287	297	001	1	
	190821	CV 10x10	F	K	T	-40	340	334	298	324			
	190821	CV 10x10	F	K	T	-40	333	226	271	277	001	1	
754582	195706	CV 10x10	F	O	T	-40	365	374	349	363			
756276	191220	CV 10x10	F	O	T	-40	135	353	370	286			
	195705	CV 10x10	F	O	T	-40	356	376	382	371			
	191220	CV 10x10	F	O	T	-40	302	234	130	222	001	1	
	191220	CV 10x10	F	K	T	-40	356	370	360	362			
	191220	CV 10x10	F	K	T	-40	65	51	76	64	001	1	
756875	195702	CV 10x10	F	O	T	-40	328	338	327	331			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
757417	190834	CV 10x10	F	O	T	-40	258	278	329	288			
	194083	CV 10x10	F	O	T	-40	250	263	251	255			
	194084	CV 10x10	F	O	T	-40	311	310	329	317			
	190834	CV 10x10	F	O	T	-40	194	257	211	221	001	1	
	194083	CV 10x10	F	O	T	-40	252	191	209	217	001	1	
	194084	CV 10x10	F	O	T	-40	210	118	200	176	001	1	
	190834	CV 10x10	F	K	T	-40	252	288	132	224			
	194083	CV 10x10	F	K	T	-40	235	248	191	225			
	194084	CV 10x10	F	K	T	-40	266	305	266	279			
	190834	CV 10x10	F	K	T	-40	112	69	48	76	001	1	
	194083	CV 10x10	F	K	T	-40	135	122	187	148	001	1	
	194084	CV 10x10	F	K	T	-40	252	239	239	244	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
860447	171382	CV 10x10	F	O	T	-40	284	137	152	191			
	171382	CV 10x10	F	O	T	-40	234	229	303	255	001	1	
	171382	CV 10x10	F	K	T	-40	44	177	228	150			
	171382	CV 10x10	F	K	T	-40	92	181	145	140	001	1	
863391	195701	CV 10x10	F	O	T	-40	342	350	333	342			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
864105	191783	CV 10x10	F	O	T	-40	327	319	357	334			
	191785	CV 10x10	F	O	T	-40	313	333	307	318			
	194359	CV 10x10	F	O	T	-40	338	348	315	334			
	191783	CV 10x10	F	O	T	-40	309	304	299	304	001	1	
	191785	CV 10x10	F	O	T	-40	281	291	293	288	001	1	
	194359	CV 10x10	F	O	T	-40	273	312	309	298	001	1	
	191783	CV 10x10	F	K	T	-40	302	291	245	279			
	191785	CV 10x10	F	K	T	-40	285	290	299	291			
	194359	CV 10x10	F	K	T	-40	321	324	310	318			
	191783	CV 10x10	F	K	T	-40	229	221	114	188	001	1	
	191785	CV 10x10	F	K	T	-40	243	300	306	283	001	1	
	194359	CV 10x10	F	K	T	-40	229	242	300	257	001	1	
948259	195707	CV 10x10	F	O	T	-40	366	347	318	344			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
950779	190819	CV 10x10	F	O	T	-40	277	293	287	286			
	190819	CV 10x10	F	O	T	-40	283	299	298	293	001	1	
	190819	CV 10x10	F	K	T	-40	258	232	247	246			
	190819	CV 10x10	F	K	T	-40	53	161	246	153	001	1	
951251	195699	CV 10x10	F	O	T	-40	329	336	346	337			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
951324	190831	CV 10x10	F	O	T	-40	249	315	44	203			
	194085	CV 10x10	F	O	T	-40	304	298	311	304			
	194365	CV 10x10	F	O	T	-40	194	208	217	206			
	194366	CV 10x10	F	O	T	-40	252	316	279	283			
	190831	CV 10x10	F	O	T	-40	220	205	228	218	001	1	
	194085	CV 10x10	F	O	T	-40	233	248	246	242	001	1	
	194365	CV 10x10	F	O	T	-40	252	243	266	254	001	1	
	194366	CV 10x10	F	O	T	-40	223	244	246	238	001	1	
	190831	CV 10x10	F	K	T	-40	62	232	121	138			
	194085	CV 10x10	F	K	T	-40	66	273	284	207			
	194365	CV 10x10	F	K	T	-40	297	261	278	279			
	194366	CV 10x10	F	K	T	-40	44	129	220	131			
	190831	CV 10x10	F	K	T	-40	183	182	168	177	001	1	
	194085	CV 10x10	F	K	T	-40	248	193	229	223	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
951324	194365	CV 10x10	F	K	T	-40	230	242	207	226	001	1	
	194366	CV 10x10	F	K	T	-40	135	153	213	167	001	1	
952379	194403	CV 10x10	F	O	T	-40	326	334	334	331			
	194406	CV 10x10	F	O	T	-40	374	365	370	369			
	194407	CV 10x10	F	O	T	-40	369	360	362	364			
	194408	CV 10x10	F	O	T	-40	359	366	347	357			
	194422	CV 10x10	F	O	T	-40	364	354	357	358			
>=						-40	29	29	29	46			
Set values <=													
752354	190821	CV 10x10	F	ZB2	T	-40	319	308	302	310			strain aged 5%, 60 min. at 250°C
754582	168794	CV 10x10	F	ZB2	T	-40	332	54	327	238			strain aged 5%, 60 min. at 250°C
756276	191220	CV 10x10	F	ZB2	T	-40	197	41	121	120			strain aged 5%, 60 min. at 250°C
756875	195702	CV 10x10	F	ZB2	T	-40	252	279	300	277			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
757417	190834	CV 10x10	F	ZB2	T	-40	50	58	53	54			strain aged 5%, 60 min. at 250°C
860447	163141	CV 10x10	F	ZB2	T	-40	66	62	48	59			strain aged 5%, 60 min. at 250°C
863391	195701	CV 10x10	F	ZB2	T	-40	309	311	296	306			strain aged 5%, 60 min. at 250°C
864105	191785	CV 10x10	F	ZB2	T	-40	290	298	286	292			strain aged 5%, 60 min. at 250°C
948259	195707	CV 10x10	F	ZB2	T	-40	309	312	327	316			strain aged 5%, 60 min. at 250°C
950779	191781	CV 10x10	F	ZB2	T	-40	304	312	316	311			strain aged 5%, 60 min. at 250°C
951251	195699	CV 10x10	F	ZB2	T	-40	285	82	313	227			strain aged 5%, 60 min. at 250°C
951324	190831	CV 10x10	F	ZB2	T	-40	236	217	246	233			strain aged 5%, 60 min. at 250°C
952379	194406	CV 10x10	F	ZB2	T	-40	311	113	327	250			strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  K: ½ t
  O: surface
  ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43				
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH		samp.cond.
						°C	J	J	J	J				

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
752354	190821	F	OS	HV10	262	272	264
754582	164400	F	OS	HV10	198	202	202
756276	191220	F	OS	HV10	222	228	227
756875	195702	F	OS	HV10	210	207	208
757417	190834	F	OS	HV10	272	281	267
860447	171382	F	OS	HV10	251	255	255
863391	195701	F	OS	HV10	210	211	215
864105	191785	F	OS	HV10	215	220	226
948259	170926	F	OS	HV10	206	209	207
950779	182618	F	OS	HV10	216	217	219
951251	195699	F	OS	HV10	208	207	208
951324	190831	F	OS	HV10	276	267	266
952379	194406	F	OS	HV10	209	208	206

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>= Set values <=						416	416	416	25	25	25	35
754582	164880	Ø	9.98	F	S	562	561	562	83	83	85	84
756276	191220	Ø	9.98	F	S	565	567	564	84	84	84	84
756875	195702	Ø	9.97	F	S	592	590	590	77	79	78	78
863391	195701	Ø	9.97	F	S	598	600	599	78	81	81	80
948259	170926	Ø	9.95	F	S	589	589	589	82	84	83	83
951251	195699	Ø	9.98	F	S	588	586	586	82	82	80	81
952379	194406	Ø	10.02	F	S	569	569	569	84	83	83	83
>= Set values <=						400	400	400	25	25	25	35
752354	159898	Ø	9.97	F	S	593	594	598	58	60	42	53
756276	191220	Ø	9.98	F	S	565	567	564	84	84	84	84
757417	190834	Ø	9.98	F	S	603	604	605	69	71	79	73
860447	171382	Ø	9.96	F	S	592	588	592	70	71	75	72
864105	191785	Ø	10.00	F	S	593	595	590	77	79	78	78
950779	181839	Ø	9.94	F	S	599	600	598	81	81	79	80
951324	190831	Ø	9.98	F	S	601	603	600	71	78	79	76

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
752354	190821	.051	.182	1.530	.005	.0008	.032	.181	.530	.120	.032	.003	.026	.013	.0044	.0002	.0020	.0007	.0020	.0020
754582	168790	.030	.290	1.580	.006	.0006	.035	.178	.230	.025	.138	.004	.033	.011	.0050	.0002	.0020	.0013	.0020	.0020
756276	191220	.031	.317	1.610	.005	.0005	.046	.170	.170	.004	.163	.003	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020
756875	195702	.036	.346	1.600	.005	.0008	.040	.177	.170	.009	.166	.003	.038	.013	.0063	.0003	.0020	.0018	.0020	.0020
757417	190834	.063	.394	1.550	.007	.0005	.032	.193	.270	.012	.159	.005	.027	.012	.0057	.0002	.0020	.0015	.0020	.0020
	194083	.064	.397	1.550	.008	.0005	.034	.193	.270	.013	.157	.005	.027	.012	.0057	.0002	.0020	.0019	.0020	.0020
	194084	.063	.395	1.550	.007	.0005	.032	.193	.270	.012	.159	.005	.027	.012	.0056	.0002	.0020	.0014	.0020	.0020
860447	171383	.060	.390	1.540	.008	.0007	.036	.175	.280	.018	.164	.004	.026	.011	.0042	.0003	.0020	.0026	.0020	.0020
863391	195701	.038	.333	1.640	.005	.0009	.045	.177	.170	.005	.162	.004	.037	.012	.0048	.0003	.0020	.0019	.0020	.0020
864105	191783	.045	.181	1.490	.006	.0006	.028	.173	.500	.117	.013	.005	.026	.013	.0041	.0002	.0020	.0012	.0020	.0020
	191785	.058	.170	1.440	.008	.0012	.025	.162	.520	.117	.013	.003	.026	.013	.0047	.0003	.0020	.0008	.0030	.0020
	194358	.039	.183	1.530	.008	.0008	.029	.170	.530	.121	.013	.005	.027	.012	.0049	.0002	.0030	.0017	.0020	.0020
	194359	.052	.185	1.510	.007	.0008	.027	.172	.520	.121	.014	.004	.029	.014	.0043	.0002	.0020	.0009	.0020	.0020
948259	170926	.038	.325	1.610	.005	.0006	.037	.170	.170	.006	.163	.003	.034	.012	.0050	.0003	.0020	.0015	.0020	.0020
950779	191781	.050	.175	1.530	.006	.0008	.029	.182	.490	.121	.010	.003	.025	.012	.0048	.0002	.0020	.0010	.0020	.0020
951251	195699	.030	.344	1.620	.007	.0005	.035	.177	.180	.005	.164	.004	.037	.011	.0051	.0003	.0020	.0019	.0020	.0020
951324	190831	.061	.370	1.530	.006	.0010	.036	.178	.270	.011	.152	.004	.027	.010	.0060	.0003	.0020	.0019	.0020	.0020
	194085	.058	.379	1.540	.007	.0008	.040	.172	.270	.013	.151	.004	.026	.010	.0056	.0002	.0020	.0022	.0020	.0020
	194365	.059	.381	1.540	.007	.0008	.039	.173	.270	.012	.151	.004	.026	.010	.0060	.0002	.0020	.0021	.0020	.0020
	194366	.058	.379	1.540	.007	.0007	.035	.181	.270	.012	.154	.004	.026	.010	.0054	.0002	.0020	.0023	.0020	.0020
952379	194402	.032	.316	1.590	.005	.0011	.036	.177	.170	.006	.157	.003	.034	.011	.0071	.0002	.0020	.0017	.0020	.0020
	194406	.032	.315	1.610	.006	.0007	.040	.175	.170	.006	.156	.003	.036	.012	.0064	.0003	.0020	.0016	.0020	.0020
	194408	.032	.315	1.610	.006	.0008	.041	.173	.170	.006	.156	.003	.035	.012	.0061	.0003	.0020	.0019	.0020	.0020
	194420	.032	.314	1.600	.006	.0007	.041	.173	.170	.006	.156	.003	.035	.012	.0060	.0002	.0020	.0017	.0030	.0020

Augsburg, 2023-09-04

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Surveyor

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
752354	190821	.0020	.0020	.40	.16	.029	.042	7.27
754582	168790	.0020	.0020	.36	.14	.037	.048	7.00
756276	191220	.0020	.0020	.36	.14	.039	.052	9.39
756875	195702	.0020	.0020	.36	.15	.041	.054	6.35
757417	190834	.0020	.0020	.39	.18	.032	.044	5.61
	194083	.0020	.0020	.39	.18	.032	.044	5.96
	194084	.0020	.0020	.39	.18	.032	.044	5.71
860447	171383	.0020	.0020	.39	.17	.030	.041	8.57
863391	195701	.0020	.0020	.37	.15	.041	.053	9.38
864105	191783	.0020	.0020	.39	.15	.031	.044	6.83
	191785	.0020	.0020	.39	.16	.029	.042	5.32
	194358	.0020	.0020	.39	.15	.032	.044	5.92
	194359	.0020	.0020	.40	.16	.033	.047	6.28
948259	170926	.0020	.0020	.36	.15	.037	.049	7.40
950779	191781	.0020	.0020	.40	.16	.028	.040	6.04
951251	195699	.0020	.0020	.36	.14	.041	.052	6.86
951324	190831	.0020	.0020	.38	.17	.031	.041	6.00
	194085	.0020	.0020	.38	.17	.030	.040	7.14
	194365	.0020	.0020	.38	.17	.030	.040	6.50
	194366	.0020	.0020	.38	.17	.030	.040	6.48
952379	194402	.0020	.0020	.36	.14	.037	.048	5.07
	194406	.0020	.0020	.36	.14	.039	.051	6.25
	194408	.0020	.0020	.36	.14	.038	.050	6.72
	194420	.0020	.0020	.36	.14	.038	.050	6.83

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

Remarks

Simulated heat treatment of test coupons:

Item 50:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 60:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 70:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 80:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 90:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 120:

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Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 130:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Augsburg, 2023-09-04

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 50, 60, 70, 80, 90, 100, 110, 120, 130
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Augsburg, 2023-09-04

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voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

N141R4Y6-5

Z02 Date 19-03-2019

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	**A0363339/A**	**A08 Order-No.:**	**8501044**	**A07 OrderDat.**	14-11-2018	**Date of dispatch**	15-03-2019 4F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo.
6509

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460G2+M Z35 NORSOK MDS Y40 **B03 Standard** EN 10225 : 2009

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
STOCK ORDER

B03 - Supplementary requirements
PLATES IN THICKNESS >=15 MM UP TO <=40 MM: MATERIAL IS ACCORDING TO EN10225 OPTIONS 2, 6, 12, 13, 18 AND 28.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS PRE-QUALIFIED ACC. TO ANNEX E OF EN10225

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
905526	103233/1	100	35,00	3000,0	12000	1		10.079	79764	13-01-2019	S460MLNORZ35
905526	103234/1	100	35,00	3000,0	12000	1		10.074	79764	13-01-2019	S460MLNORZ35
		Sum				**2**		**20.153**			

B14 - Supplementary information
Dimensional tolerances acc. EN 10029/10
Flatness acc. EN 10029/10 class N
EN10163-2: Class A3 - Repair-welding not permitted.
Thicknesstolerance acc. EN 10029/10 tab.1 class B

A04
Symbol of the manufacturer's work

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Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

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Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
905526	.032	.344	1.620	.007	.0003	.031	.181	.170	.004	.160	.004	.037	.013	.0060	.0002	.0020	.0016	.0020	.0020	.002	.36	.15

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	LF01 %	LF02 %	LF03 %
>=			
Set values <=	.090	.110	.900
905526	.041	.054	.515

C99 - Supplementary information
BI <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Reh/Rm %	C11 Rp0,2/Rm %
Set values >=							460	460	550		17.0		
Set values <=							580	580	700			90.00	90.00
905526	103233	30,0	36.06	F	O	T		476	605	A5	24.8		78.79

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	29	29	29	46	
905526	103233	CV 10x10	F	ZB2	T	-40	333	329	321	327	strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60	
905526	103233	CV 10x10	F	O	T	-40	348	357	358	354	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
905526	101569	F	OS	HV10	245	248	241

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values	>=					440	440	440	25	25	25	35
	<=											
905526	103233	Ø	9.98	F	S	597	597	595	81	82	80	81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=		.150				.015													
Set values	<=	.150	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
905526	101565	.034	.339	1.590	.007	.0007	.033	.190	.180	.005	.159	.004	.037	.013	.0056	.0002	.0020	.0015	.0030	.0020
	101575	.032	.335	1.610	.007	.0007	.033	.192	.180	.005	.157	.004	.036	.013	.0049	.0002	.0020	.0017	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
	>=						
Set values	<=	.010	.43	.22	.090	.110	.900
905526	101565	.002	.36	.15	.041	.054	.534
	101575	.002	.36	.15	.040	.053	.534

C99 - Supplementary information
BI <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the

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Remarks

certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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Quality Department Heavy Plates
BERGER Alfred

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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Stamp of the inspection representative

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Issued at **Augsburg** on 2019-03-19

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Surveyor

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Inspection representative voestalpine Grobblech
Quality Department Heavy Plates
BERGER Alfred

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4E6-14

Z02 Date 18-04-2023

A04 manufacturer's work symbol
voestalpine

A03 Document number **A0375876/A** | A08 Order-No.: **2532476** | A07 OrderDat. 14-12-2022 | Date of dispatch 14-04-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6848

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product: Plate

B02 Material: S460MLO

B03 Standard: EN 10225-1 : 2019

Supplementary requirements: Z35 - EN 10164

B04 Delivery condition: thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
753741	154923/1	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154925/1	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154925/2	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154928/1	10	20,00	2500,0	12000	1		4.826	81851	S460MLOVAS
859285	155008/1	30	25,00	2051,0	16000	1		6.525	81853	S460MLOVAS
859285	155010/1	30	25,00	2051,0	16000	1		6.520	81851	S460MLOVAS
859286	155012/1	30	25,00	2051,0	16000	1		6.521	81852	S460MLOVAS
859599	152732/1	250	60,00	3500,0	12000	1		20.150	81853	S460MLOVAS
859599	152733/1	270	65,00	3050,0	12000	1		19.045	81853	S460MLOVAS
859599	153043/1	260	65,00	3000,0	12000	1		18.741	81853	S460MLOVAS
859727	154866/1	170	40,00	3050,0	12000	1		11.693	81853	S460MLOVAS
859727	154887/1	90	30,00	2500,0	16000	1		9.580	81853	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
859727	154896/1	280	30,00	2051,0	12000	1		5.889	81853	S460MLOVAS
859727	154936/1	10	20,00	2500,0	12000	1		4.826	81851	S460MLOVAS
859729	156190/1	320	30,00	3050,0	12000	1		8.744	81853	S460MLOVAS
859729	156191/1	320	30,00	3050,0	12000	1		8.746	81853	S460MLOVAS
859729	156192/1	320	30,00	3050,0	12000	1		8.745	81853	S460MLOVAS
859729	156193/1	320	30,00	3050,0	12000	1		8.742	81853	S460MLOVAS
859729	156195/1	100	30,00	3000,0	12000	1		8.630	81853	S460MLOVAS
859729	156201/1	60	25,00	3250,0	14000	1		9.104	81853	S460MLOVAS
859729	156202/1	20	20,00	3050,0	16000	1		7.848	81851	S460MLOVAS
859729	156204/1	20	20,00	3050,0	16000	1		7.846	81851	S460MLOVAS
859729	156206/1	20	20,00	3050,0	16000	1		7.846	81851	S460MLOVAS
859729	156207/1	20	20,00	3050,0	16000	1		7.843	81851	S460MLOVAS
859729	157025/2	280	30,00	2051,0	12000	1		5.881	81853	S460MLOVAS
944916	156173/1	150	40,00	2500,0	12000	1		9.586	81853	S460MLOVAS
944918	157243/1	170	40,00	3050,0	12000	1		11.655	81853	S460MLOVAS
944918	157244/1	170	40,00	3050,0	12000	1		11.661	81853	S460MLOVAS
944918	157245/1	170	40,00	3050,0	12000	1		11.625	81853	S460MLOVAS
944918	157246/1	170	40,00	3050,0	12000	1		11.688	81853	S460MLOVAS
945463	156782/1	110	30,00	3000,0	16000	1		11.493	81853	S460MLOVAS
945942	156872/1	180	40,00	3750,0	14000	1		16.712	81853	S460MLOVAS
947433	154869/1	140	40,00	2051,0	16000	1		10.470	81853	S460MLOVAS
947433	154870/1	140	40,00	2051,0	16000	1		10.455	81853	S460MLOVAS
947433	154881/1	120	35,00	3000,0	12000	1		10.075	81853	S460MLOVAS
947433	156208/1	50	25,00	2500,0	16000	1		8.016	81853	S460MLOVAS
947433	156209/1	50	25,00	2500,0	16000	1		8.011	81853	S460MLOVAS
947433	156211/1	50	25,00	2500,0	16000	1		8.004	81853	S460MLOVAS
		Sum				**38**		**358.232**		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
753741	.032	.336	1.620	.007	.0005	.031	.176	.170	.008	.175	.004	.035	.011	.0069	.0002	.0020	.0018	.0020	.0020	.0020	.36
859285	.035	.345	1.610	.006	.0009	.038	.177	.170	.008	.156	.003	.037	.013	.0038	.0002	.0020	.0017	.0020	.0020	.0020	.36
859286	.029	.358	1.700	.006	.0005	.038	.187	.180	.005	.162	.004	.037	.013	.0048	.0002	.0020	.0019	.0020	.0020	.0020	.37
859599	.063	.375	1.560	.008	.0004	.043	.189	.270	.005	.159	.003	.026	.013	.0051	.0002	.0020	.0016	.0020	.0020	.0020	.39
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
859729	.031	.354	1.640	.006	.0006	.034	.178	.180	.008	.169	.004	.036	.010	.0040	.0002	.0020	.0018	.0020	.0020	.0020	.37
944916	.030	.355	1.650	.006	.0010	.040	.187	.170	.010	.152	.004	.037	.013	.0057	.0002	.0020	.0023	.0020	.0020	.0020	.37
944918	.032	.343	1.640	.007	.0010	.038	.189	.180	.008	.175	.004	.036	.012	.0055	.0002	.0020	.0025	.0020	.0020	.0020	.37
945463	.028	.333	1.580	.006	.0006	.033	.180	.170	.007	.163	.004	.035	.012	.0059	.0002	.0020	.0017	.0020	.0020	.0020	.35
945942	.033	.316	1.610	.006	.0007	.039	.169	.170	.025	.165	.003	.037	.013	.0057	.0002	.0020	.0013	.0020	.0020	.0020	.36
947433	.036	.377	1.630	.006	.0004	.033	.174	.170	.007	.165	.003	.036	.012	.0043	.0002	.0020	.0017	.0020	.0020	.0020	.37

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
753741	.15	.039	.050	4.49
859285	.15	.040	.053	10.00
859286	.15	.041	.054	7.92
859599	.18	.029	.042	8.43
859727	.15	.039	.050	6.11
859729	.15	.040	.050	8.50
944916	.15	.041	.054	7.02
944918	.15	.040	.052	6.91
945463	.14	.039	.051	5.59
945942	.15	.040	.053	6.84
947433	.15	.039	.051	7.67

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							440	520		17.0			
Set values <=								700			93.00		
753741	154929	30,0	20.48	F	O	T	535	617	A5	23.6	86.61		
	154932	30,0	20.61	F	O	T	545	619	A5	22.5	87.97		
859285	155008	30,0	25.26	F	O	T	551	611	A5	23.0	90.17		
	155010	30,0	25.43	F	O	T	581	631	A5	21.7	91.97		
859286	155012	30,0	25.49	F	O	T	569	614	A5	21.9	92.69		
859727	154936	30,0	20.58	F	O	T	538	618	A5	23.6	87.02		
859729	156200	30,0	25.63	F	O	T	569	622	A5	22.3	91.54		
	156204	30,0	20.54	F	O	T	563	628	A5	20.4	89.74		
	156206	30,0	20.58	F	O	T	540	643	A5	22.9	84.01		
	156207	30,0	20.50	F	O	T	569	633	A5	22.7	89.88		
947433	156208	30,0	25.69	F	O	T	564	622	A5	22.7	90.61		
	156209	30,0	25.19	F	O	T	561	624	A5	22.0	90.01		
>=							420	520		17.0			
Set values <=								700			93.00		
859727	154866	30,0	40.75	F	O	T	516	605	A5	22.5	85.40		
	154888	30,0	30.50	F	O	T	540	594	A5	23.4	90.84		
	154896	30,0	30.64	F	O	T	531	591	A5	23.5	89.79		
859729	156191	30,0	30.83	F	O	T	547	612	A5	23.7	89.46		
	156193	30,0	30.60	F	O	T	549	611	A5	24.2	89.89		
	156196	30,0	30.84	F	O	T	577	628	A5	22.6	91.92		
	157025	30,0	30.41	F	O	T	513	585	A5	23.4	87.74		
944916	156173	30,0	40.62	F	O	T	507	593	A5	22.0	85.50		
944918	157244	30,0	41.05	F	O	T	542	624	A5	21.6	86.78		
	157245	30,0	40.61	F	O	T	533	620	A5	21.4	85.99		
945463	156782	30,0	30.66	F	O	T	542	599	A5	23.6	90.48		
945942	156872	30,0	40.57	F	O	T	494	592	A5	23.6	83.45		
947433	154869	30,0	41.14	F	O	T	484	626	A5	24.0	77.30		
	154881	30,0	35.78	F	O	T	544	646	A5	23.3	84.24		
>=							415	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							415	500		17.0			
Set values <=								675			93.00		
859599	152732	Ø	9.99	F	V	T	428	593	A5	27.7	72.21		
	152732	Ø	10.01	F	V	T	529	619	A5	24.8	85.51	001	1
>=							405	500		17.0			
Set values <=								675			93.00		
859599	153043	Ø	9.99	F	V	T	445	587	A5	27.3	75.74		
	153043	Ø	9.99	F	V	T	455	560	A5	28.8	81.28	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	29	29	29	46			
Set values	<=												
753741	154894	CV 10x10	F	ZB2	T	-40	321	327	311	320		strain aged 5%, 60 min. at 250°C	
859285	154998	CV 10x10	F	ZB2	T	-40	316	316	308	313		strain aged 5%, 60 min. at 250°C	
859286	155005	CV 10x10	F	ZB2	T	-40	326	324	347	332		strain aged 5%, 60 min. at 250°C	
859599	153043	CV 10x10	F	ZB2	T	-40	68	174	75	106		strain aged 5%, 60 min. at 250°C	
859727	154866	CV 10x10	F	ZB2	T	-40	321	292	317	310		strain aged 5%, 60 min. at 250°C	
859729	156193	CV 10x10	F	ZB2	T	-40	326	323	315	321		strain aged 5%, 60 min. at 250°C	
944916	134244	CV 10x10	F	ZB2	T	-40	290	331	283	301		strain aged 5%, 60 min. at 250°C	
944918	157245	CV 10x10	F	ZB2	T	-40	244	29	63	112		strain aged 5%, 60 min. at 250°C	
945463	132752	CV 10x10	F	ZB2	T	-40	316	330	326	324		strain aged 5%, 60 min. at 250°C	
945942	156872	CV 10x10	F	ZB2	T	-40	320	291	53	221		strain aged 5%, 60 min. at 250°C	
947433	154869	CV 10x10	F	ZB2	T	-40	332	343	361	345		strain aged 5%, 60 min. at 250°C	
	>=					-40	42	42	42	60			
Set values	<=												

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
753741	154929	CV 10x10	F	O	T	-40	406	432	442	427			
	154932	CV 10x10	F	O	T	-40	409	444	452	435			
859285	155008	CV 10x10	F	O	T	-40	347	373	376	365			
859286	155012	CV 10x10	F	O	T	-40	353	357	383	364			
859599	152732	CV 10x10	F	O	T	-40	279	330	322	310			
	153043	CV 10x10	F	O	T	-40	348	322	301	324			
	152732	CV 10x10	F	O	T	-40	307	257	255	273	001	1	
	153043	CV 10x10	F	O	T	-40	187	229	251	222	001	1	
	152732	CV 10x10	F	K	T	-40	230	251	61	180			
	153043	CV 10x10	F	K	T	-40	293	285	279	286			
	152732	CV 10x10	F	K	T	-40	140	48	209	132	001	1	
	153043	CV 10x10	F	K	T	-40	277	291	253	274	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
Set values	<=												
859727	154866	CV 10x10	F	O	T	-40	340	330	380	350			
	154888	CV 10x10	F	O	T	-40	370	384	394	383			
	154896	CV 10x10	F	O	T	-40	352	370	368	363			
	154936	CV 10x10	F	O	T	-40	433	444	448	441			
859729	156191	CV 10x10	F	O	T	-40	351	364	351	355			
	156193	CV 10x10	F	O	T	-40	352	351	369	357			
	156196	CV 10x10	F	O	T	-40	348	359	381	363			
	156200	CV 10x10	F	O	T	-40	368	372	384	374			
	156206	CV 10x10	F	O	T	-40	329	359	342	343			
944916	156173	CV 10x10	F	O	T	-40	354	335	380	356			
944918	157244	CV 10x10	F	O	T	-40	325	362	377	354			
	157245	CV 10x10	F	O	T	-40	320	341	353	338			
945463	156782	CV 10x10	F	O	T	-40	327	341	354	341			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
945942	156872	CV 10x10	F	O	T	-40	293	341	370	335			
947433	154869	CV 10x10	F	O	T	-40	356	383	411	383			
	154881	CV 10x10	F	O	T	-40	380	377	418	391			
	156208	CV 10x10	F	O	T	-40	343	347	368	352			

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
753741	154894	F	OS	HV10	199	203	202
859285	151315	F	OS	HV10	204	206	203
859286	155458	F	OS	HV10	218	221	223
859599	153043	F	OS	HV10	257	254	257
859727	154898	F	OS	HV10	203	199	204
859729	156206	F	OS	HV10	218	217	214
944916	134244	F	OS	HV10	218	215	218
944918	157245	F	OS	HV10	230	235	226
945463	132752	F	OS	HV10	217	217	226
945942	153948	F	OS	HV10	188	190	187
947433	156208	F	OS	HV10	216	211	218

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						416	416	416	25	25	25	35
753741	154932	Ø	6.00	F	S	615	612	615	81	81	84	82
859285	155008	Ø	10.02	F	S	603	603	601	81	81	83	82
859286	155012	Ø	10.01	F	S	599	598	598	82	81	82	82
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
	154936	Ø	6.00	F	S	602	607	605	85	83	82	83
859729	156193	Ø	10.00	F	S	595	595	595	83	79	80	81
	156206	Ø	5.97	F	S	636	635	636	82	82	85	83
944916	134244	Ø	9.99	F	S	586	585	586	84	84	83	84
944918	157245	Ø	10.01	F	S	591	590	593	82	76	80	79
945463	132752	Ø	10.00	F	S	578	579	578	84	81	82	83
945942	153948	Ø	9.98	F	S	596	598	592	85	84	83	84
947433	156208	Ø	10.00	F	S	609	609	609	85	83	82	83
Set values >=						400	400	400	25	25	25	35
859599	153043	Ø	9.96	F	S	582	585	586	80	76	74	76

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
753741	154894	.031	.329	1.620	.007	.0004	.032	.169	.170	.007	.175	.003	.036	.011	.0055	.0002	.0020	.0015	.0020	.0020
	154932	.030	.335	1.620	.007	.0003	.033	.170	.170	.007	.171	.003	.035	.011	.0051	.0002	.0020	.0016	.0020	.0020
859285	151315	.037	.351	1.600	.006	.0009	.036	.189	.180	.009	.156	.003	.035	.012	.0052	.0003	.0020	.0022	.0020	.0020
859286	155458	.029	.343	1.680	.006	.0005	.038	.180	.180	.005	.164	.003	.036	.013	.0042	.0002	.0020	.0016	.0020	.0020
859599	152732	.059	.371	1.540	.008	.0005	.042	.188	.270	.005	.158	.003	.026	.012	.0049	.0002	.0020	.0015	.0020	.0020
	153043	.061	.373	1.550	.009	.0003	.043	.184	.270	.005	.160	.003	.026	.012	.0051	.0002	.0020	.0016	.0020	.0020
859727	154866	.030	.348	1.620	.006	.0003	.035	.173	.180	.006	.169	.003	.035	.011	.0047	.0002	.0020	.0020	.0020	.0020
	154888	.031	.344	1.610	.005	.0004	.033	.172	.180	.006	.173	.003	.035	.011	.0045	.0002	.0020	.0017	.0020	.0020
	154937	.030	.347	1.620	.006	.0003	.035	.174	.180	.006	.171	.003	.034	.011	.0048	.0002	.0020	.0019	.0020	.0020
859729	154891	.032	.354	1.620	.006	.0009	.034	.178	.180	.007	.166	.004	.036	.010	.0042	.0003	.0030	.0017	.0020	.0020
	156191	.033	.363	1.630	.007	.0005	.032	.182	.180	.008	.166	.003	.035	.009	.0052	.0002	.0020	.0017	.0020	.0020
	156193	.031	.362	1.630	.006	.0005	.034	.180	.180	.008	.165	.003	.035	.010	.0043	.0002	.0020	.0017	.0020	.0020
	156196	.034	.366	1.620	.006	.0003	.033	.177	.170	.007	.166	.003	.036	.011	.0040	.0002	.0020	.0017	.0020	.0020
	156206	.031	.356	1.640	.006	.0008	.035	.178	.180	.007	.169	.004	.037	.011	.0042	.0002	.0020	.0014	.0020	.0020
944916	156172	.029	.341	1.600	.006	.0009	.036	.187	.170	.009	.157	.004	.034	.011	.0049	.0002	.0020	.0021	.0020	.0020
944918	157244	.032	.334	1.610	.007	.0007	.038	.182	.180	.008	.175	.003	.035	.012	.0052	.0002	.0020	.0022	.0020	.0020
	157245	.032	.336	1.620	.007	.0006	.038	.182	.180	.008	.176	.003	.036	.012	.0051	.0002	.0020	.0020	.0020	.0020
945463	156782	.030	.332	1.590	.006	.0003	.032	.180	.170	.007	.162	.003	.035	.012	.0055	.0002	.0020	.0017	.0020	.0020
945942	153948	.034	.329	1.600	.007	.0007	.039	.184	.180	.027	.165	.003	.034	.012	.0059	.0002	.0020	.0016	.0020	.0020
947433	154881	.036	.372	1.620	.006	.0003	.033	.171	.170	.007	.166	.003	.037	.012	.0038	.0002	.0020	.0016	.0020	.0020
	156208	.036	.369	1.610	.006	.0006	.033	.174	.170	.006	.165	.003	.037	.012	.0041	.0003	.0020	.0015	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.41	.22	.120	.130	
753741	154894	.0020	.0020	.36	.14	.039	.050	5.82
	154932	.0020	.0020	.36	.14	.038	.049	6.47
859285	151315	.0020	.0020	.37	.15	.038	.050	6.92
859286	155458	.0020	.0020	.37	.15	.039	.052	9.05
859599	152732	.0020	.0020	.38	.17	.029	.041	8.57
	153043	.0020	.0020	.39	.17	.029	.041	8.43
859727	154866	.0020	.0020	.36	.14	.038	.049	7.45
	154888	.0020	.0020	.36	.14	.038	.049	7.33
	154937	.0020	.0020	.36	.14	.037	.048	7.29
859729	154891	.0020	.0020	.36	.15	.040	.050	8.10
	156191	.0020	.0020	.37	.15	.038	.047	6.15
	156193	.0020	.0020	.36	.15	.038	.048	7.91
	156196	.0020	.0020	.36	.15	.039	.050	8.25
	156206	.0020	.0020	.37	.15	.041	.052	8.33
944916	156172	.0020	.0020	.36	.14	.038	.049	7.35
944918	157244	.0020	.0020	.36	.15	.038	.050	7.31
	157245	.0020	.0020	.36	.15	.039	.051	7.45
945463	156782	.0020	.0020	.36	.14	.038	.050	5.82
945942	153948	.0020	.0020	.37	.15	.037	.049	6.61
947433	154881	.0020	.0020	.36	.15	.040	.052	8.68
	156208	.0020	.0020	.36	.15	.040	.052	8.05

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

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Remarks

Simulated heat treatment of test coupons:

Item 250:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 260:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 270:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 50, 60, 90, 100, 110, 120, 140, 150, 170, 180, 280, 320
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 250, 260, 270
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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64886

voestalpine Grobblech GmbH

A02
Inspection certificate
EN 10204 - 3.2

N1423VKC-4

Z02 Date 17-06-2021

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0370161/A	A08 Order-No.:	1500331	A07 OrderDat.	25-02-2021	Date of dispatch	14-06-2021	400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6704

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
Options 1, 6, 7, 9, 11, 12, 17 of EN 10225:2019 and Option 18 of EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
735829	285775/1	20	15,00	2500,0	12000	1		3.571	53654	S460MLOVAS
735829	285775/2	20	15,00	2500,0	12000	1		3.570	53654	S460MLOVAS
735829	285777/1	20	15,00	2500,0	12000	1		3.597	53654	S460MLOVAS
735829	285777/2	20	15,00	2500,0	12000	1		3.597	53654	S460MLOVAS
735829	285779/1	20	15,00	2500,0	12000	1		3.595	53654	S460MLOVAS
735829	285779/2	20	15,00	2500,0	12000	1		3.595	53654	S460MLOVAS
735829	285781/1	20	15,00	2500,0	12000	1		3.619	53654	S460MLOVAS
735829	285781/2	20	15,00	2500,0	12000	1		3.619	53654	S460MLOVAS
735829	285783/2	20	15,00	2500,0	12000	1		3.594	53654	S460MLOVAS
735829	285783/1	20	15,00	2500,0	12000	1		3.593	53654	S460MLOVAS
839780	279894/1	190	80,00	2000,0	16000	1		20.508	53657	S460MLOVAS
839885	279974/1	150	45,00	2500,0	12000	1		10.761	53657	S460MLOVAS

A04
Symbol of the manufacturer's work

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~~Witnessed~~ Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.

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Inspection representative voestalpine Grobblech
LINTNER Norbert

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
839885	279975/1	150	45,00	2500,0	12000	1		10.748	53657	S460MLOVAS
839886	281434/1	160	50,00	2051,0	12000	1		9.850	53657	S460MLOVAS
840319	282095/1	90	30,00	2500,0	15750	1		9.423	53657	S460MLOVAS
840319	282097/1	90	30,00	2500,0	16000	1		9.622	53657	S460MLOVAS
840319	282099/1	90	30,00	2500,0	16000	1		9.589	53657	S460MLOVAS
840319	282103/1	140	40,00	2500,0	12000	1		9.583	53657	S460MLOVAS
840319	282105/1	140	40,00	2500,0	12000	1		9.583	53657	S460MLOVAS
840319	282107/1	140	40,00	2500,0	12000	1		9.496	53657	S460MLOVAS
840319	282108/1	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282108/2	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282109/1	140	40,00	2500,0	12000	1		9.590	53657	S460MLOVAS
840319	282110/2	30	20,00	2500,0	12000	1		4.829	53656	S460MLOVAS
840319	282110/1	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282111/1	140	40,00	2500,0	12000	1		9.589	53657	S460MLOVAS
840319	282112/1	30	20,00	2500,0	12000	1		4.801	53654	S460MLOVAS
840319	282112/2	30	20,00	2500,0	12000	1		4.801	53654	S460MLOVAS
840319	282113/1	140	40,00	2500,0	12000	1		9.555	53657	S460MLOVAS
840319	282703/1	110	35,00	2500,0	16000	1		11.167	53657	S460MLOVAS
840319	282704/1	110	35,00	2500,0	16000	1		11.131	53657	S460MLOVAS
840319	282705/1	110	35,00	2500,0	16000	1		11.185	53657	S460MLOVAS
840320	282101/1	50	22,00	2500,0	12000	1		5.252	53657	S460MLOVAS
840320	282101/2	50	22,00	2500,0	12000	1		5.253	53657	S460MLOVAS
840320	282114/2	30	20,00	2500,0	12000	1		4.828	53657	S460MLOVAS
840320	282114/1	30	20,00	2500,0	12000	1		4.828	53655	S460MLOVAS
840320	282115/2	60	25,00	2051,0	12000	1		4.912	53657	S460MLOVAS
840320	282115/1	60	25,00	2051,0	12000	1		4.913	53657	S460MLOVAS
840320	282116/21	30	20,00	2500,0	12000	1		4.804	53657	S460MLOVAS
840320	282116/11	30	20,00	2500,0	12000	1		4.805	53655	S460MLOVAS
840320	282117/2	60	25,00	2051,0	12000	1		4.911	53657	S460MLOVAS
840320	282117/1	60	25,00	2051,0	12000	1		4.911	53657	S460MLOVAS
840983	285758/1	80	30,00	2500,0	12000	1		7.171	53657	S460MLOVAS
840983	285759/1	80	30,00	2500,0	12000	1		7.141	53657	S460MLOVAS
840983	285760/1	80	30,00	2500,0	12000	1		7.138	53657	S460MLOVAS
840983	285761/1	80	30,00	2500,0	12000	1		7.147	53657	S460MLOVAS

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☐ Witnessed ☒ Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.

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Inspection representative voestalpine Grobblech
LINTNER Norbert

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
840983	285762/1	80	30,00	2500,0	12000	1		7.147	53657	S460MLOVAS
926774	281728/1	120	35,00	3000,0	12000	1		10.046	53657	S460MLOVAS
926774	284937/1	170	50,00	3000,0	16000	1		19.199	53657	S460MLOVAS
928521	282096/1	130	40,00	2051,0	12000	1		7.870	53657	S460MLOVAS
928521	282102/1	100	35,00	2500,0	12000	1		8.404	53657	S460MLOVAS
928521	282104/1	100	35,00	2500,0	12000	1		8.403	53657	S460MLOVAS
928521	282106/1	120	35,00	3000,0	12000	1		10.068	53657	S460MLOVAS
928521	285656/1	180	60,00	2051,0	12000	1		11.808	53657	S460MLOVAS
		Sum				54		397.204		

B14 - Supplementary information

length-deviation for plate(s) 282095/1: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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DNV — SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT — 1864
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EN 10225-1 : 2019
Date: 2021-06-24
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Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
Set values	>=						.015																
	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.010	.41	.23
735829		.036	.341	1.610	.008	.0007	.041	.174	.170	.006	.160	.003	.038	.012	.0048	.0002	.0020	.0020	.0030	.0020	.002	.36	.15
Set values	>=						.015																
	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.010	.41	.22
839780		.065	.391	1.550	.007	.0007	.037	.179	.270	.012	.167	.005	.027	.013	.0052	.0002	.0020	.0015	.0020	.0020	.002	.39	.18
839885		.030	.314	1.580	.006	.0004	.031	.176	.160	.003	.164	.005	.040	.011	.0050	.0002	.0020	.0015	.0020	.0020	.002	.35	.14
839886		.028	.316	1.580	.007	.0005	.036	.165	.160	.004	.164	.004	.037	.012	.0044	.0002	.0020	.0016	.0020	.0020	.002	.35	.14
840319		.028	.344	1.620	.005	.0005	.028	.174	.170	.004	.163	.005	.038	.011	.0057	.0002	.0020	.0017	.0020	.0020	.002	.36	.14
840320		.032	.339	1.650	.008	.0005	.044	.186	.180	.006	.156	.005	.040	.013	.0045	.0002	.0020	.0021	.0020	.0030	.002	.37	.15
840983		.033	.343	1.620	.007	.0012	.031	.170	.170	.004	.167	.004	.035	.012	.0053	.0002	.0020	.0016	.0020	.0020	.002	.36	.15
926774		.032	.342	1.620	.009	.0008	.038	.183	.180	.005	.162	.003	.036	.013	.0044	.0003	.0020	.0016	.0020	.0020	.002	.36	.15
928521		.030	.337	1.630	.007	.0004	.035	.173	.170	.007	.157	.005	.039	.012	.0034	.0002	.0020	.0016	.0020	.0020	.002	.36	.14

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LINTNER Norbert

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	Al/N
>=			2.00
Set values <=	.120	.130	
735829	.041	.053	8.54
>=			2.00
Set values <=	.120	.130	
839780	.032	.045	7.12
839885	.045	.056	6.20
839886	.041	.053	8.18
840319	.043	.054	4.91
840320	.045	.058	9.78
840983	.039	.051	5.85
926774	.039	.052	8.64
928521	.044	.056	10.29

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Al/N: Al/N
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	520		17.0			
Set values <=								700			93.00		
735829	285775	30,0	15.26	F	O	T	552	599	A5	21.6	92.10		
	285777	30,0	15.45	F	O	T	531	646	A5	23.5	82.19		
	285789	30,0	15.61	F	O	T	560	611	A5	20.0	91.55		
>=							440	520		17.0			
Set values <=								700			93.00		
840319	282112	30,0	20.14	F	O	T	532	589	A5	22.0	90.37		
840320	282115	30,0	25.22	F	O	T	539	598	A5	24.1	90.13		
	282116	30,0	20.32	F	O	T	534	592	A5	19.0	90.12		
>=							420	520		17.0			
Set values <=								700			93.00		
840319	282099	30,0	30.78	F	O	T	526	593	A5	24.5	88.72		
	282103	30,0	41.09	F	O	T	485	593	A5	23.9	81.83		
	282111	30,0	40.81	F	O	T	488	595	A5	23.3	82.10		
	282113	30,0	40.44	F	O	T	481	594	A5	24.7	81.02		
	282705	30,0	36.16	F	O	T	486	600	A5	24.6	81.10		
840983	285754	30,0	30.64	F	O	T	533	603	A5	22.1	88.48		
	286029	30,0	30.37	F	O	T	526	590	A5	24.7	89.08		
926774	281728	30,0	35.72	F	O	T	478	597	A5	25.6	79.97		
928521	282096	30,0	41.11	F	O	T	464	586	A5	25.1	79.18		
	282104	30,0	35.90	F	O	T	487	590	A5	24.1	82.59		
>=							415	500		17.0			
Set values <=								675			93.00		
839885	279975	Ø	10.01	F	V	T	453	569	A5	27.8	79.68		
	279975	Ø	10.01	F	V	T	491	571	A5	28.0	86.05	001	1
839886	278846	Ø	9.99	F	V	T	492	580	A5	27.6	84.82		
	281434	Ø	10.01	F	V	T	517	587	A5	28.7	87.97	001	1
926774	284937	Ø	10.00	F	V	T	477	583	A5	26.7	81.84		
	284937	Ø	10.00	F	V	T	509	585	A5	28.6	87.03	001	1
928521	282872	Ø	10.01	F	V	T	478	563	A5	27.2	84.96		
	282872	Ø	10.03	F	V	T	462	539	A5	30.0	85.74	001	1
>=							405	500		17.0			

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LINTNER Norbert

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ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							405	500		17.0			
Set values <=								675			93.00		
839780	279894	Ø	10.00	F	V	T	431	576	A5	23.8	74.78		
	279894	Ø	10.01	F	V	T	481	577	A5	27.0	83.37	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	29	29	29	46			
Set values <=													
735829	285777	CV 10x10	F	ZB2	T	-40	343	339	345	342			strain aged 5%, 60 min. at 250°C
839780	278095	CV 10x10	F	ZB2	T	-40	227	254	216	233			strain aged 5%, 60 min. at 250°C
839885	278843	CV 10x10	F	ZB2	T	-40	351	348	359	353			strain aged 5%, 60 min. at 250°C
839886	278846	CV 10x10	F	ZB2	T	-40	356	347	349	350			strain aged 5%, 60 min. at 250°C
840319	282112	CV 10x10	F	ZB2	T	-40	338	342	342	341			strain aged 5%, 60 min. at 250°C
840320	282115	CV 10x10	F	ZB2	T	-40	360	345	365	356			strain aged 5%, 60 min. at 250°C
840983	285754	CV 10x10	F	ZB2	T	-40	287	290	288	288			strain aged 5%, 60 min. at 250°C
926774	281728	CV 10x10	F	ZB2	T	-40	362	327	336	342			strain aged 5%, 60 min. at 250°C
	284937	CV 10x10	F	ZB2	T	-40	353	338	356	349			strain aged 5%, 60 min. at 250°C
928521	281154	CV 10x10	F	ZB2	T	-40	354	368	359	360			strain aged 5%, 60 min. at 250°C
	282104	CV 10x10	F	ZB2	T	-40	374	359	348	360			strain aged 5%, 60 min. at 250°C
	>=					-40	42	42	42	60			
Set values <=													

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
735829	285775	CV 10x10	F	O	T	-40	343	353	358	351			
	285777	CV 10x10	F	O	T	-40	314	334	339	329			
	285789	CV 10x10	F	O	T	-40	380	374	379	378			
839780	279894	CV 10x10	F	O	T	-40	148	272	274	231			
	279894	CV 10x10	F	O	T	-40	201	214	243	219	001	1	
	279894	CV 10x10	F	K	T	-40	210	225	116	184			
	279894	CV 10x10	F	K	T	-40	73	117	52	80	001	1	
839885	279975	CV 10x10	F	O	T	-40	345	351	347	347			
	279975	CV 10x10	F	O	T	-40	344	317	309	323	001	1	
	279975	CV 10x10	F	K	T	-40	380	376	378	378			
	279975	CV 10x10	F	K	T	-40	54	321	303	226	001	1	

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ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
839886	278118	CV 10x10	F	O	T	-40	344	344	345	344			
	281434	CV 10x10	F	O	T	-40	291	315	319	308	001	1	
	278846	CV 10x10	F	K	T	-40	375	368	363	369			
	281434	CV 10x10	F	K	T	-40	332	318	304	318	001	1	
840319	282099	CV 10x10	F	O	T	-40	359	357	368	361			
	282103	CV 10x10	F	O	T	-40	406	376	399	393			
	282112	CV 10x10	F	O	T	-40	376	369	345	363			
	282113	CV 10x10	F	O	T	-40	362	365	379	369			
	282705	CV 10x10	F	O	T	-40	340	355	358	351			
840320	282115	CV 10x10	F	O	T	-40	359	358	353	357			
	282116	CV 10x10	F	O	T	-40	363	349	362	358			
840983	285754	CV 10x10	F	O	T	-40	341	315	329	328			
	286029	CV 10x10	F	O	T	-40	328	326	360	338			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
926774	281728	CV 10x10	F	O	T	-40	372	351	370	364			
	284937	CV 10x10	F	O	T	-40	365	345	347	353			
	284937	CV 10x10	F	O	T	-40	287	291	280	286	001	1	
	284937	CV 10x10	F	K	T	-40	329	375	364	356			
	284937	CV 10x10	F	K	T	-40	305	265	303	291	001	1	
928521	282096	CV 10x10	F	O	T	-40	371	389	374	378			
	282104	CV 10x10	F	O	T	-40	381	396	401	393			
	282872	CV 10x10	F	O	T	-40	352	352	352	352			
	282872	CV 10x10	F	O	T	-40	335	345	336	339	001	1	
	282872	CV 10x10	F	K	T	-40	374	361	387	374			
	282872	CV 10x10	F	K	T	-40	318	341	330	330	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom

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ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
735829	285777	F	OS	HV10	230	226	224
839780	279894	F	OS	HV10	245	243	239
839885	279975	F	OS	HV10	210	215	209
839886	281434	F	OS	HV10	235	220	223
840319	282112	F	OS	HV10	207	204	203
840320	282115	F	OS	HV10	197	202	205
840983	285754	F	OS	HV10	198	193	190
926774	281728	F	OS	HV10	211	216	209
928521	282104	F	OS	HV10	216	209	226

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Gröbming
LINTNER Norbert

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						416	416	416	25	25	25	35
735829	285777	Ø	6.03	F	S	616	615	617	81	80	83	81
840319	282112	Ø	6.05	F	S	599	598	599	80	83	82	82
	282113	Ø	9.98	F	S	574	574	574	83	82	83	83
840320	282115	Ø	9.98	F	S	587	587	587	82	82	83	82
	282116	Ø	6.04	F	S	615	611	608	82	81	83	82
840983	285754	Ø	9.98	F	S	587	590	589	79	77	79	78
926774	281728	Ø	9.97	F	S	580	582	581	82	82	80	81
928521	282104	Ø	9.98	F	S	567	571	570	83	78	81	81
Set values >=						400	400	400	25	25	25	35
839780	278095	Ø	10.01	F	S	566	567	567	80	80	80	80
839885	278148	Ø	9.97	F	S	559	555	558	79	83	82	81
839886	278118	Ø	9.99	F	S	543	543	544	62	64	61	62
926774	267726	Ø	9.95	F	S	550	549	551	84	85	83	84
928521	282872	Ø	10.00	F	S	540	538	537	83	85	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
735829	285777	.036	.335	1.590	.007	.0008	.037	.172	.170	.006	.160	.003	.037	.012	.0043	.0002	.0020	.0020	.0020	.0030
	286058	.036	.336	1.590	.008	.0005	.040	.173	.170	.005	.159	.003	.038	.012	.0032	.0002	.0020	.0019	.0020	.0020
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
839780	279894	.061	.389	1.560	.008	.0007	.040	.177	.270	.015	.161	.005	.028	.013	.0040	.0002	.0020	.0019	.0020	.0020
839885	279975	.031	.310	1.590	.007	.0007	.034	.169	.170	.004	.160	.004	.039	.010	.0042	.0002	.0020	.0019	.0020	.0020
839886	281434	.029	.319	1.610	.007	.0007	.039	.163	.170	.006	.165	.003	.035	.012	.0037	.0002	.0020	.0017	.0020	.0020
840319	282103	.030	.333	1.640	.007	.0007	.032	.178	.180	.006	.160	.004	.040	.011	.0042	.0002	.0020	.0019	.0020	.0020
	282110	.029	.335	1.650	.007	.0007	.032	.179	.180	.006	.161	.004	.040	.011	.0039	.0002	.0020	.0017	.0020	.0020
	282112	.030	.332	1.620	.006	.0006	.032	.179	.180	.006	.159	.004	.039	.011	.0040	.0002	.0020	.0019	.0020	.0020
	282704	.031	.334	1.640	.007	.0007	.031	.180	.180	.006	.161	.004	.040	.011	.0044	.0002	.0020	.0017	.0020	.0020
840320	282114	.031	.332	1.620	.007	.0006	.036	.183	.180	.006	.156	.004	.039	.012	.0040	.0002	.0020	.0018	.0020	.0020
	282115	.032	.335	1.640	.008	.0007	.043	.180	.180	.006	.154	.004	.039	.013	.0043	.0002	.0020	.0017	.0020	.0020
840983	285754	.034	.341	1.620	.008	.0013	.033	.175	.180	.006	.165	.004	.039	.012	.0049	.0002	.0020	.0017	.0030	.0020
	286018	.033	.343	1.610	.007	.0010	.035	.173	.170	.006	.162	.004	.038	.012	.0042	.0002	.0020	.0018	.0020	.0020
926774	281728	.032	.336	1.610	.008	.0010	.037	.182	.170	.004	.154	.003	.037	.012	.0044	.0002	.0020	.0018	.0020	.0020
928521	282104	.029	.333	1.610	.008	.0007	.033	.166	.170	.006	.157	.005	.039	.012	.0036	.0002	.0020	.0015	.0030	.0020
	285259	.030	.332	1.600	.007	.0004	.035	.173	.170	.007	.157	.005	.038	.012	.0032	.0002	.0020	.0015	.0020	.0020

Z03
third party stamp

DNV
SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT
1864
Witnessed Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.
This document has been digitally signed and will therefore not have handwritten signatures.

Z02
Inspection representative voestalpine Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.010	.0100	.41	.23	.120	.130	
735829	285777	.002	.0020	.36	.15	.040	.052	8.60
	286058	.002	.0020	.36	.15	.041	.053	12.50
	>=							2.00
Set values	<=	.010	.0100	.41	.22	.120	.130	
839780	279894	.002	.0020	.39	.18	.033	.046	10.00
839885	279975	.002	.0020	.35	.14	.043	.053	8.10
839886	281434	.002	.0020	.35	.14	.038	.050	10.54
840319	282103	.002	.0020	.36	.14	.044	.055	7.62
	282110	.002	.0020	.36	.14	.044	.055	8.21
	282112	.002	.0020	.36	.14	.043	.054	8.00
	282704	.002	.0020	.37	.15	.044	.055	7.05
840320	282114	.002	.0020	.36	.14	.043	.055	9.00
	282115	.002	.0020	.37	.15	.043	.056	10.00
840983	285754	.002	.0020	.36	.15	.043	.055	6.73
	286018	.002	.0020	.36	.15	.042	.054	8.33
926774	281728	.002	.0020	.36	.14	.040	.052	8.41
928521	282104	.002	.0020	.35	.14	.044	.056	9.17
	285259	.002	.0020	.36	.14	.043	.055	10.94

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Al/N: Al/N
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 150-190:

Z03
third party stamp

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT
☐ Witnessed ☒ Reviewed
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Z02
Inspection representative voestalpine Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z03
third party stamp

DNV – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 1864
~~Witnessed~~ Reviewed
And found to comply with:
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Date: 2021-06-24
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Z02
Inspection representative voestalpine Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 20, 30, 50, 60, 80, 90, 100, 110, 120, 130, 140, 150
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 160, 170, 180, 190
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z03
third party stamp

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And found to comply with:
EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.
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Z02
Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

72990

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396787**
Seite/Page 1/11
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
11	1	527274 1	56592	TM	40,00 x 2500,0 x 12000
11	1	529130 1	26954	TM	40,00 x 2500,0 x 12000
11	1	529131 1	56590	TM	40,00 x 2500,0 x 12000
11	1	529132 1	26434	TM	40,00 x 2500,0 x 12000
11	1	529133 1	25623	TM	40,00 x 2500,0 x 12000
11	1	529134 1	00099	TM	40,00 x 2500,0 x 12000
11	1	529136 1	25623	TM	40,00 x 2500,0 x 12000
11	1	529137 1	00320	TM	40,00 x 2500,0 x 12000
11	1	529138 1	46179	TM	40,00 x 2500,0 x 12000
Σ	9	Gewicht / Weight (B12) 84.780 kg / kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
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(A02)

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Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 ^A MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30	Cr % ≤ 0,25	Ni % ≤ 0,70
00099	0,08	0,20	1,60	0,015	0,003	0,005	0,035	0,22	0,04	0,35
00320	0,08	0,21	1,56	0,015	0,002	0,005	0,032	0,22	0,05	0,33
25623	0,09	0,19	1,57	0,011	0,001	0,005	0,039	0,22	0,02	0,34
26434	0,08	0,23	1,65	0,015	0,002	0,005	0,043	0,21	0,04	0,34
26954	0,08	0,19	1,62	0,014	0,001	0,005	0,039	0,23	0,05	0,35
46179	0,06	0,15	1,52	0,012	0,001	0,005	0,033	0,23	0,03	0,64

Schmelzen-Nr. Heat No. (B07)	V % ≤ 0,08	Ti % ≤ 0,025	Nb % ≤ 0,050	B % ≤ 0,0008	Mo % ≤ 0,25	As % ≤ 0,030	Sn % ≤ 0,020	Pb % ≤ 0,010	Ca % ≤ 0,005	EV1 1) % ≤ 0,22
00099	0,03	0,002	0,035	0,0001	0,004	0,003	0,004	0,000	0,002	0,19
00320	0,03	0,002	0,036	0,0000	0,02	0,004	0,003	0,000	0,002	0,19
25623	0,04	0,002	0,038	0,0000	0,01	0,003	0,007	0,000	0,002	0,20
26434	0,03	0,002	0,035	0,0000	0,01	0,003	0,002	0,000	0,001	0,19
26954	0,04	0,003	0,035	0,0002	0,01	0,003	0,006	0,000	0,001	0,19
46179	0,04	0,002	0,022	0,0000	0,002	0,003	0,002	0,000	0,001	0,17

Schmelzen-Nr. Heat No. (B07)	Sb % ≤ 0,010	EV2 2) % ≤ 0,41	Bi % ≤ 0,010	EV3 3) % ≤ 0,13	EV4 4) %	Nb+V % ≤ 0,12
00099	0,000	0,40	0,000	0,07	0,61	0,07
00320	0,001	0,40	0,000	0,07	0,62	0,07
25623	0,001	0,40	0,000	0,08	0,59	0,08
26434	0,001	0,41	0,000	0,07	0,60	0,07
26954	0,000	0,41	0,000	0,08	0,64	0,08
46179	0,000	0,39	0,000	0,06	0,90	0,06

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396787**
Seite/Page 3/11
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
56590	0,08	0,18	1,57	0,014	0,001	0,004	0,039	0,21	0,03	0,34
56592	0,08	0,22	1,60	0,015	0,001	0,004	0,026	0,23	0,03	0,34

Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
56590	0,03	0,002	0,036	0,0000	0,001	0,002	0,001	0,000	0,001	0,19
56592	0,04	0,003	0,036	0,0000	0,001	0,002	0,001	0,000	0,001	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12
56590	0,001	0,39	0,000	0,07	0,58	0,07
56592	0,000	0,40	0,000	0,08	0,60	0,08

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

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D-38871 Ilsenburg
(A01)

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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

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Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
529134	00099	0,08	0,22	1,59	0,020	0,004	0,005	0,037	0,24
529137	00320	0,07	0,20	1,59	0,019	0,001	0,005	0,034	0,22
529136	25623	0,09	0,18	1,58	0,013	0,000	0,004	0,038	0,22
529132	26434	0,08	0,21	1,62	0,013	0,001	0,005	0,048	0,21
529130	26954	0,08	0,19	1,58	0,016	0,000	0,003	0,035	0,25
529138	46179	0,06	0,15	1,47	0,016	0,002	0,004	0,033	0,24

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,050	Mo % ≤ 0,25	B % ≤ 0,0008	EV1 1) % ≤ 0,22
529134	00099	0,05	0,34	0,032	0,001	0,029	0,003	0,0004	0,19
529137	00320	0,04	0,32	0,035	0,003	0,036	0,02	0,0001	0,18
529136	25623	0,02	0,33	0,037	0,001	0,044	0,01	0,0000	0,20
529132	26434	0,04	0,32	0,027	0,001	0,029	0,01	0,0001	0,19
529130	26954	0,05	0,33	0,031	0,003	0,028	0,01	0,0001	0,19
529138	46179	0,04	0,68	0,048	0,001	0,026	0,002	0,0000	0,17

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,41	EV3 3) %	EV4 4) % ≤ 0,13	Nb+V % ≤ 0,12
529134	00099	0,40	0,63	0,06	0,06
529137	00320	0,39	0,60	0,07	0,07
529136	25623	0,40	0,58	0,08	0,08
529132	26434	0,40	0,58	0,06	0,06
529130	26954	0,40	0,64	0,06	0,06
529138	46179	0,38	0,96	0,08	0,07

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

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Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1396787**
Seite/Page 5/11
Datum/Date 04.01.2024

Nr. (A07) Order 6910 18.10.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06)

Nr. (A07) Order 6910
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
529131	56590	0,07	0,19	1,56	0,010	0,002	0,003	0,042	0,21
527274	56592	0,10	0,20	1,57	0,018	0,001	0,004	0,025	0,24

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,050	Mo % ≤ 0,25	B % ≤ 0,0008	EV1 1) % ≤ 0,22
529131	56590	0,03	0,35	0,031	0,003	0,043	0,003	0,0001	0,18
527274	56592	0,03	0,34	0,034	0,002	0,030	0,001	0,0000	0,21

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,41	EV3 3) %	EV4 4) % ≤ 0,13	Nb+V % ≤ 0,12
529131	56590	0,38	0,59	0,08	0,07
527274	56592	0,41	0,61	0,07	0,06

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

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S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
527274	56592	K4G	Q	TM	P	488	559	0,87	29	
527274	56592	K4G	Q	TS	P	500	557	0,89	27	
529130	26954	K4G	Q	TM	P	518	573	0,88	24	
529130	26954	K4G	Q	TS	P	528	577	0,88	25	
529131	56590	K4G	Q	TM	P	525	578	0,86	26	
529131	56590	K4G	Q	TS	P	512	566	0,86	28	
529132	26434	K4G	Q	TM	P	518	588	0,83	25	
529132	26434	K4G	Q	TS	P	526	571	0,87	25	
529133	25623	K4G	Q	TM	P	491	562	0,85	27	
529133	25623	K4G	Q	TS	P	513	568	0,87	26	
529134	00099	K4G	Q	TM	P	483	550	0,85	29	
529134	00099	K4G	Q	TS	P	491	544	0,87	28	
529136	25623	K4G	Q	TM	P	524	577	0,86	26	
529136	25623	K4G	Q	TS	P	526	559	0,89	27	
529137	00320	K4G	Q	TM	P	505	565	0,89	27	
529137	00320	K4G	Q	TS	P	521	572	0,87	29	
529138	46179	K4G	Q	TM	P	508	556	0,88	27	
529138	46179	K4G	Q	TS	P	527	574	0,88	27	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: $L_o = 5{,}65\sqrt{S_o}$

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

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Erzeugnis Grobblech
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Werksauftrags-Nr. 0000116550
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Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
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DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4) % ≥ 35	
				% ≥ 25				
527274	56592	K4	TM	75	76	69	73	
529130	26954	K4	TM	62	55	66	61	
529131	56590	K4	TM	69	72	71	71	
529132	26434	K4	TM	69	73	69	70	
529134	00099	K4	TM	74	74	69	72	
529136	25623	K4	TM	65	71	64	67	
529137	00320	K4	TM	62	67	70	66	
529138	46179	K4	TM	74	73	74	74	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				MPa ≥ 416				
527274	56592	K4	TM	571	574	573		
529130	26954	K4	TM	579	585	579		
529131	56590	K4	TM	564	568	566		
529132	26434	K4	TM	566	580	587		
529134	00099	K4	TM	533	535	535		
529136	25623	K4	TM	577	576	580		
529137	00320	K4	TM	560	562	562		
529138	46179	K4	TM	561	563	563		

1) K : Kopf / Top
2) 4 : 1/4 Breite / 1/4 Width
3) TM : thermomechanisch gewalzt / thermomechanically rolled
4) MW : Mittelwert / Average

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
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DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
527274	56592	K4O	Q	A5	KV600	-040	224	245	235	235
527274	56592	K4O	Q	TM	KV600	-040	312	352	293	319
527274	56592	K4O	Q	TS	KV600	-040	281	265	275	274
529130	26954	K4O	Q	A5	KV600	-040	205	211	192	203
529130	26954	K4O	Q	TM	KV600	-040	241	237	300	259
529130	26954	K4O	Q	TS	KV600	-040	217	223	197	212
529131	56590	K4O	Q	A5	KV600	-040	230	153	232	205
529131	56590	K4O	Q	TM	KV600	-040	285	314	309	303
529131	56590	K4O	Q	TS	KV600	-040	261	255	268	261
529132	26434	K4O	Q	A5	KV600	-040	270	276	251	266
529132	26434	K4O	Q	TM	KV600	-040	330	308	339	326
529132	26434	K4O	Q	TS	KV600	-040	295	294	275	288
529134	00099	K4O	Q	A5	KV600	-040	168	170	209	182
529134	00099	K4O	Q	TM	KV600	-040	223	227	229	226
529134	00099	K4O	Q	TS	KV600	-040	262	263	264	263
529136	25623	K4O	Q	A5	KV600	-040	99	78	93	90
529136	25623	K4O	Q	TM	KV600	-040	234	211	205	217
529136	25623	K4O	Q	TS	KV600	-040	213	209	202	208
529137	00320	K4O	Q	A5	KV600	-040	215	229	244	229
529137	00320	K4O	Q	TM	KV600	-040	213	257	231	234
529137	00320	K4O	Q	TS	KV600	-040	280	280	268	276
529138	46179	K4O	Q	A5	KV600	-040	276	288	262	275
529138	46179	K4O	Q	TM	KV600	-040	288	266	277	277
529138	46179	K4O	Q	TS	KV600	-040	310	369	289	323

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

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(A04)

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Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
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Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
527274	56592	K4		TM	175			
529130	26954	K4		TM	179			
529131	56590	K4		TM	180			
529132	26434	K4		TM	184			
529134	00099	K4		TM	173			
529136	25623	K4		TM	179			
529137	00320	K4		TM	177			
529138	46179	K4		TM	175			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
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S460MLOILG

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung(StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
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DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
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Cyron

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400198

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 03.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria
Office: **Vienna**

Clients Order Number: **4500259**
Date: **27-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **21-03-2024**
final: **21-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

1 piece(s) of steel plate(s) **9420 kg** , as per attached inspection Certificate no.: **A0378722**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-3

Z02 Date 27-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378722**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.** 30-01-2024	**Date of dispatch** 27-03-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,12,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225, EDITION 2019, ANNEX B // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
958443	251505/1	20	40,00	2500,0	12000	1		9.420	43293	1PLATCS40052
	Sum					**1**		**9.420**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
958443	.030	.320	1.610	.005	.0006	.035	.171	.170	.005	.156	.005	.035	.012	.0059	.0002	.0060	.0014	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
958443	.14	.040	.052	5.93

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						420	520		17.0			
Set values	<=							700			93.00		
958443	251505	30,0	40.10	F	O	T	485	579	A5	24.4	83.90		
	251505	30,0	39.92	F	O	T	497	569	A5	25.9	87.38	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
958443	251505	CV 10x10	F	O	T	-40	402	414	410	409			
	251505	CV 10x10	F	O	T	-40	334	317	336	329	001	1	
>= Set values <=						-40	29	29	29	46			
958443	251505	CV 10x10	F	ZB2	T	-40	348	346	348	347			strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
958443	251505	Ø	9.98	F	S	558	555	554	79	83	80	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
958443	251505	.035	.321	1.600	.006	.0008	.034	.170	.170	.005	.155	.004	.035	.011	.0062	.0003	.0020	.0015	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.43	.22	.120	.110	
958443	251505	.0020	.0020	.36	.15	.039	.050	5.48

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 20:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400226

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 4**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **03-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **27-03-2024**

final: **27-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

1 piece(s) of steel plate(s) **8718 kg** , as per attached inspection Certificate no.: **A0378805**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-4

Z02 Date 03-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378805**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.** 30-01-2024	**Date of dispatch** 01-04-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,12,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225, EDITION 2019, ANNEX B // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
764225	249348/1	10	50,00	2200,0	10000	1		8.718	43482	1PLATCS50045
		Sum				**1**		**8.718**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
764225	.031	.319	1.610	.007	.0007	.039	.169	.180	.004	.164	.005	.036	.012	.0043	.0002	.0020	.0014	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
764225	.14	.041	.053	9.07

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						415	500		17.0			
Set values	<=							675			93.00		
764225	249348	Ø	10.01	F	V	T	593	645	A5	22.0	92.03		
	249348	Ø	9.98	F	V	T	530	605	A5	26.3	87.73	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
764225	249348	CV 10x10	F	O	T	-40	341	338	335	338			
	249348	CV 10x10	F	O	T	-40	290	274	271	278	001	1	
	249348	CV 10x10	F	K	T	-40	346	356	358	353			
	249348	CV 10x10	F	K	T	-40	243	255	312	270	001	1	
>=						-40	29	29	29	46			
Set values <=													
764225	249348	CV 10x10	F	ZB2	T	-40	276	310	321	302			strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C42 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.

C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						400	400	400	25	25	25	35
Set values <=												
764225	249348	Ø	9.93	F	S	577	579	580	82	83	82	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764225	249348	.036	.332	1.610	.007	.0006	.039	.175	.180	.005	.162	.004	.034	.011	.0052	.0003	.0020	.0013	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.43	.22	.120	.110	
764225	249348	.0020	.0020	.36	.15	.038	.049	7.50

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 10:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400227

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 5**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **03-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **27-03-2024**

final: **29-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

3 piece(s) of steel plate(s) **17428 kg** , as per attached inspection Certificate no.: **A0378806**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-5

Z02 Date 03-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378806**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.**	30-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225,EDITION 2019, ANNEX B. // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764225	251508/1	60	20,00	3000,0	12000	1		5.648	43560	03-04-2024	1PLATCS20052
869545	253329/1	50	25,00	2500,0	12000	1		5.890	43482	01-04-2024	1PLATCS25057
869545	253329/2	50	25,00	2500,0	12000	1		5.890	43482	01-04-2024	1PLATCS25057
		Sum				**3**		**17.428**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
764225	.031	.319	1.610	.007	.0007	.039	.169	.180	.004	.164	.005	.036	.012	.0043	.0002	.0020	.0014	.0020	.0020	.0020	.36
869545	.036	.342	1.620	.006	.0008	.034	.173	.170	.010	.168	.003	.038	.013	.0051	.0002	.0020	.0018	.0020	.0020	.0020	.37

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
764225	.14	.041	.053	9.07
869545	.15	.041	.054	6.67

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							440	520		17.0			
Set values <=								700			93.00		
764225	251508	30,0	19.90	F	O	T	544	607	A5	18.5	89.49		
	251508	30,0	19.89	F	O	T	554	620	A5	23.6	89.35	001	1
869545	253329	30,0	24.86	F	O	T	548	614	A5	21.9	89.25		
	253329	30,0	24.85	F	O	T	560	627	A5	23.0	89.31	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
764225	251508	CV 10x10	F	ZB2	T	-40	325	326	320	324			strain aged 5%, 60 min. at 250°C
869545	253329	CV 10x10	F	ZB2	T	-40	317	334	325	325			strain aged 5%, 60 min. at 250°C
>=						-40	42	42	42	60			
Set values <=													
764225	251508	CV 10x10	F	O	T	-40	382	366	363	370			
	251508	CV 10x10	F	O	T	-40	316	326	324	322	001	1	
869545	253329	CV 10x10	F	O	T	-40	331	323	342	332			
	253329	CV 10x10	F	O	T	-40	293	315	300	303	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.

C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764225	249348	.036	.332	1.610	.007	.0006	.039	.175	.180	.005	.162	.004	.034	.011	.0052	.0003	.0020	.0013	.0020	.0020
869545	253329	.037	.343	1.630	.006	.0008	.036	.182	.170	.011	.166	.004	.037	.013	.0058	.0002	.0020	.0021	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.110	
764225	249348	.0020	.0020	.36	.15	.038	.049	7.50
869545	253329	.0020	.0020	.37	.15	.041	.054	6.21

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 50:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Item 60:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

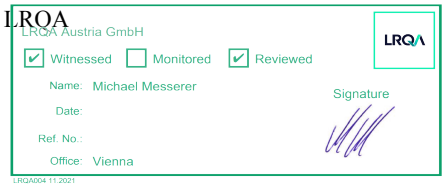
C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA



11-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400296

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 6**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **22-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **16-04-2024**

final: **16-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

2 piece(s) of steel plate(s) **11829 kg** , as per attached inspection Certificate no.: **A0379008**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-6

Z02 Date 22-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0379008**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.**	30-01-2024

Date of dispatch 11-04-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225,EDITION 2019, ANNEX B. // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
869546	258381/2	50	25,00	2500,0	12000	1		5.913	43822	1PLATCS25057
869546	258381/1	50	25,00	2500,0	12000	1		5.916	43822	1PLATCS25057
	Sum					**2**		**11.829**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
869546	.030	.330	1.610	.007	.0007	.036	.170	.170	.004	.162	.004	.035	.012	.0058	.0002	.0020	.0022	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
869546	.14	.039	.051	6.21

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							440	520		17.0			
Set values <=								700			93.00		
869546	258381	30,0	25.22	F	O	T	512	577	A5	23.9	88.76		
	258381	30,0	25.23	F	O	T	525	591	A5	23.3	88.91	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
869546	258381	CV 10x10	F	O	T	-40	374	367	403	381			
	258381	CV 10x10	F	O	T	-40	326	336	343	335	001	1	
>= Set values <=						-40	29	29	29	46			
869546	258381	CV 10x10	F	ZB2	T	-40	358	341	369	356			strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869546	258381	.034	.328	1.610	.007	.0008	.034	.170	.170	.004	.162	.004	.035	.012	.0056	.0002	.0020	.0018	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.43	.22	.120	.110	
869546	258381	.0020	.0020	.36	.15	.039	.051	6.07

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 50:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Remarks

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400298

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 7**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **25-04-2024**

Order Status: **complete**

Inspection Dates
First: **16-04-2024**

final: **25-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

2 piece(s) of steel plate(s) **11729 kg** , as per attached inspection Certificate no.: **A0379065**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-7 K

Z02 Date 25-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0379065**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.**	30-01-2024	**Date of dispatch**	11-04-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225,EDITION 2019, ANNEX B. // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
765003	257250/1	50	25,00	2500,0	12000	1		5.864	43819	1PLATCS25057
868836	257249/1	50	25,00	2500,0	12000	1		5.865	43819	1PLATCS25057
	Sum					**2**		**11.729**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
765003	.027	.338	1.610	.005	.0009	.040	.184	.170	.008	.162	.004	.037	.013	.0057	.0003	.0020	.0016	.0020	.0020	.0020	.36
868836	.034	.326	1.620	.005	.0007	.033	.175	.170	.005	.164	.005	.040	.013	.0063	.0003	.0030	.0018	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
765003	.14	.041	.054	7.02
868836	.15	.045	.058	5.24

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							440	520		17.0			
Set values <=								700			93.00		
765003	257250	30,0	24.85	F	O	T	515	583	A5	22.6	88.33		
	257250	30,0	24.85	F	O	T	518	590	A5	24.5	87.82	001	1
868836	257249	30,0	24.82	F	O	T	546	611	A5	21.8	89.29		
	257249	30,0	24.86	F	O	T	552	621	A5	24.4	88.89	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
765003	257250	CV 10x10	F	ZB2	T	-40	325	331	328	328			strain aged 5%, 60 min. at 250°C
868836	257249	CV 10x10	F	ZB2	T	-40	326	323	324	324			strain aged 5%, 60 min. at 250°C
>=						-40	42	42	42	60			
Set values <=													
765003	257250	CV 10x10	F	O	T	-40	337	348	349	345			
	257250	CV 10x10	F	O	T	-40	321	317	331	323	001	1	
868836	257249	CV 10x10	F	O	T	-40	347	343	348	346			
	257249	CV 10x10	F	O	T	-40	286	293	308	296	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.

C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
765003	251483	.029	.340	1.600	.006	.0005	.041	.179	.170	.008	.157	.003	.036	.013	.0054	.0002	.0020	.0019	.0020	.0020
868836	249026	.040	.324	1.610	.006	.0008	.032	.176	.170	.005	.161	.005	.039	.013	.0063	.0003	.0030	.0018	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.110	
765003	251483	.0020	.0020	.36	.14	.039	.052	7.59
868836	249026	.0020	.0020	.37	.15	.044	.057	5.08

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 50:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400178

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

28.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **22-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **13-03-2024**

final: **13-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

2 piece(s) of steel plate(s) **17462 kg** , as per attached inspection Certificate no.: **A0378614**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400044-1

Z02 Date 22-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378614**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.**	30-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,12,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225, EDITION 2019, ANNEX B // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764225	249347/1	10	50,00	2200,0	10000	1		8.722	42976	19-03-2024	1PLATCS50045
764227	249346/1	10	50,00	2200,0	10000	1		8.740	43112	21-03-2024	1PLATCS50045
		Sum				**2**		**17.462**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
764225	.031	.319	1.610	.007	.0007	.039	.169	.180	.004	.164	.005	.036	.012	.0043	.0002	.0020	.0014	.0020	.0020	.0020	.36
764227	.032	.302	1.590	.008	.0005	.036	.169	.170	.011	.173	.005	.038	.011	.0056	.0003	.0020	.0007	.0030	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
764225	.14	.041	.053	9.07
764227	.14	.043	.054	6.43

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
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27-MAR-2024

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							415	500		17.0			
Set values <=								675			93.00		
764225	249348	Ø	10.01	F	V	T	593	645	A5	22.0	92.03		
	249348	Ø	9.98	F	V	T	530	605	A5	26.3	87.73	001	1
764227	249346	Ø	10.02	F	V	T	564	620	A5	23.6	91.06		
	249346	Ø	9.99	F	V	T	533	604	A5	27.5	88.21	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
764225	249348	CV 10x10	F	O	T	-40	341	338	335	338			
	249348	CV 10x10	F	O	T	-40	290	274	271	278	001	1	
	249348	CV 10x10	F	K	T	-40	346	356	358	353			
	249348	CV 10x10	F	K	T	-40	243	255	312	270	001	1	
764227	249346	CV 10x10	F	O	T	-40	356	344	353	351			
	249346	CV 10x10	F	O	T	-40	290	304	307	300	001	1	
	249346	CV 10x10	F	K	T	-40	363	369	382	371			
	249346	CV 10x10	F	K	T	-40	278	331	45	218	001	1	
>= Set values <=						-40	29	29	29	46			
764225	249348	CV 10x10	F	ZB2	T	-40	276	310	321	302			strain aged 5%, 60 min. at 250°C
764227	249346	CV 10x10	F	ZB2	T	-40	338	333	340	337			strain aged 5%, 60 min. at 250°C

C40;shape:

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43				
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH		samp.cond.
						°C	J	J	J	J				

CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
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Name: Michael Messerer
Date:
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Office: Vienna
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27-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						400	400	400	25	25	25	35
764225	249348	Ø	9.93	F	S	577	579	580	82	83	82	82
764227	245888	Ø	9.99	F	S	570	570	571	84	83	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764225	249348	.036	.332	1.610	.007	.0006	.039	.175	.180	.005	.162	.004	.034	.011	.0052	.0003	.0020	.0013	.0020	.0020
764227	249346	.033	.300	1.580	.008	.0004	.037	.164	.170	.010	.169	.004	.037	.011	.0047	.0002	.0020	.0007	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

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ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.110	
764225	249348	.0020	.0020	.36	.15	.038	.049	7.50
764227	249346	.0020	.0020	.35	.14	.041	.052	7.87

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 10:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000173	122A70C	Q012400197

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

03.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400044 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500259**

Date: **27-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **21-03-2024**

final: **21-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000173 122A70C**

Description:

2 piece(s) of steel plate(s) **15352 kg** , as per attached inspection Certificate no.: **A0378721**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

Surveyor to LRQA Austria GmbH

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400044-2

Z02 Date 27-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378721**	**A08 Order-No.:**	**4500259**	**A07 OrderDat.**	30-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO **B03 Standard** EN 10225-1 : 2019

A07 OrderNo. 1724000173 122A70C

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225, EDITION 2019, OPTIONS 1,2,3,6,7,8,9,10,11,17,18 AND 24. // MATERIAL IS PRE-QUALIFIED AS PER EN10225,EDITION 2019, ANNEX B. // SPEC.: 122A70C-MTO-ST-011_00 AND 3417-000-S-SP-WOD-90002 - STRUCTURAL STEEL MATERIALS SPECIFICATION

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
864467	251506/1	30	35,00	2500,0	12000	1		8.302	43288	26-03-2024	1PLATCS35045
867619	251507/1	40	30,00	2500,0	12000	1		7.050	43293	27-03-2024	1PLATCS30052
		Sum				**2**		**15.352**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab. 1 class A

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
864467	.031	.328	1.600	.009	.0003	.031	.174	.170	.007	.162	.005	.038	.011	.0059	.0002	.0020	.0019	.0020	.0020	.0020	.36
867619	.029	.346	1.630	.006	.0011	.040	.182	.180	.008	.163	.005	.036	.013	.0056	.0003	.0020	.0020	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
864467	.14	.043	.054	5.25
867619	.14	.041	.054	7.14

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
Set values >=							420	520		17.0			
Set values <=								700			93.00		
864467	251506	30,0	35.13	F	O	T	497	594	A5	24.2	83.59		
	251506	30,0	35.15	F	O	T	516	586	A5	25.9	88.17	001	1
867619	251507	30,0	29.91	F	O	T	541	595	A5	23.3	90.91		
	251507	30,0	30.08	F	O	T	531	600	A5	24.7	88.49	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
864467	251506	CV 10x10	F	ZB2	T	-40	354	357	362	357			strain aged 5%, 60 min. at 250°C
867619	251507	CV 10x10	F	ZB2	T	-40	338	331	340	336			strain aged 5%, 60 min. at 250°C
>=						-40	42	42	42	60			
Set values <=													
864467	251506	CV 10x10	F	O	T	-40	439	445	448	444			
	251506	CV 10x10	F	O	T	-40	342	334	329	335	001	1	
867619	251507	CV 10x10	F	O	T	-40	375	377	407	386			
	251507	CV 10x10	F	O	T	-40	326	339	325	330	001	1	

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.

C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
864467	251506	.034	.327	1.590	.009	.0005	.031	.169	.170	.006	.162	.005	.038	.010	.0059	.0002	.0020	.0017	.0020	.0020
867619	247539	.031	.346	1.680	.008	.0011	.040	.183	.180	.009	.167	.006	.037	.013	.0064	.0002	.0020	.0019	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.110	
864467	251506	.0020	.0020	.36	.15	.043	.053	5.25
867619	247539	.0020	.0020	.37	.15	.043	.056	6.25

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 30:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

Item 40:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 100 °C/h up to 580 °C, +15 °C/-15 °C, holding time 240 minutes, cooling with max. 100 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, 100% Test, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUSIDER HEAVY PLATES S.P.A.	1724000216	123A40D	Q012400066

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

16.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | THIS DOCUMENT WAS PRODUCED AUTOMATICALLY AND IS VALID WITHOUT SIGNATURE | Number/Numero 16024115722 | Creato il 12/02/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-2:2019
Steel grade:: S355J2+N

Customer/Cliente
EUSIDER HEAVY PLATES SRL
VIA TORTONA 25
20144 MILANO IT

Code: 0000099362

Del. Address/Destinatario Merci
EUSIDER HEAVY PLATES SRL
V. PER ROGENO/FRAZ.BRENNO DELL
23845 COSTA MASNAGA IT

Delivery/N° Consegna 8920429861
Of/Del 12/02/2024
Delivery note nr/N° doc. di trasp. 1060001918

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Material/Codice Materiale
LTS

Description/Descrizione
15,00 X 2450,00 X 12000,00 S355J2+N

Surface Quality: -
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZING ROLLING
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191717497/10**
Client Order/Ordine cliente **203902**
Materiale Cliente
Client Date/data cliente **17/01/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E6011113	23307499	3528	1
2	24EP003230	23207192	3528	1
3	24EP003231	23107093	3528	1

Remarks/Note:
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
	0.2	1.6	0.55	0.025	0.025	0.3	0.3	0.55	0.02 0.3	0.08	0.06	0.1	0.05	0.012	0.45
24E6011113	.150	1.440	.200	.0040	.0140	.029	.012	.040	.039	.0020	.028	.002	.0020	.0040	.40
24EP003230	.160	1.470	.210	.0030	.0120	.028	.010	.031	.032	.0010	.029	.002	.0020	.0040	.41
24EP003231	.150	1.450	.190	.0030	.0090	.021	.009	.027	.030	.0010	.028	.002	.0020	.0040	.40

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	TESTN
					20 20	470 630	355	20					-40 -20	27	27	27		
24E6011113	P	1	P	T	20	551	451	28.0	1	P	L	10.0	-20	196	192	208	198	24-11096
24EP003230	P	1	P	T	20	552	450	27.8	1	P	L	10.0	-20	194	174	188	185	24-4842
24EP003231	P	1	P	T	20	570	468	25.0	1	P	L	10.0	-20	184	179	186	183	24-10985

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede,(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore,(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

1277/3402

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | THIS DOCUMENT WAS PRODUCED AUTOMATICALLY AND IS VALID WITHOUT SIGNATURE | Number/Numero 16024115722 | Creato il 12/02/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-2:2019
Steel grade:: S275JR

Customer/Cliente
EUSIDER HEAVY PLATES SRL
VIA TORTONA 25
20144 MILANO IT

Code: 0000099362

Del. Address/Destinatario Merci
EUSIDER HEAVY PLATES SRL
V. PER ROGENO/FRAZ.BRENNO DELL
23845 COSTA MASNAGA IT

Delivery/N° Consegna 8920429861
Of/Del 12/02/2024
Delivery note nr/N° doc. di trasp. 1060001918

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/3

Material/Codice Materiale
LTS

Description/Descrizione
15,00 X 2450,00 X 12000,00 S275JR

Surface Quality: -
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: AS ROLLED
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191717497/40**
Client Order/Ordine cliente **203902**
Materiale Cliente
Client Date/data cliente **17/01/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E6010643	2371615	3528	1

Remarks/Note:
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
	0.21	1.5	0.55	0.035	0.035	0.3	0.3	0.55	0.02 0.3	0.08	0.06	0.1	0.05	0.012	0.4
24E6010643	.179	1.165	.172	.0040	.0160	.020	.006	.011	.037	.0010	.002	.001	.0010	.0040	.38

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	TESTN
					20	410	275	21	
					20	560			
24E6010643	P	1	P	T	20	479	339	31.0	24-10635

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede,(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore,(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

1278/ 3402

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204

THIS DOCUMENT WAS PRODUCED AUTOMATICALLY AND IS VALID WITHOUT SIGNATURE

Number/Numero 16024115722 Creato il 12/02/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-2:2019
Steel grade:: S355J2+N

Customer/Cliente
EUSIDER HEAVY PLATES SRL
VIA TORTONA 25
20144 MILANO IT

Code: 0000099362

Del. Address/Destinatario Merci
EUSIDER HEAVY PLATES SRL
V. PER ROGENO/FRAZ.BRENNO DELL
23845 COSTA MASNAGA IT

Delivery/N° Consegna 8920429861
Of/Del 12/02/2024
Delivery note nr/N° doc. di trasp. 1060001918

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 3/3

Material/Codice Materiale
LTS

Description/Descrizione
20,00 X 2450,00 X 12000,00 S355J2+N

Surface Quality: -
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZING ROLLING
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191717497/20**
Client Order/Ordine cliente **203902**
Materiale Cliente
Client Date/data cliente **17/01/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E6011132	23207363	4704	1
2	24E6011134	23207363	4704	1
3	24E6011136	23207363	4704	1

Remarks/Note:
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

DDT.81086667
N.2 FOGLI 20X2500X12000

EUSIDER HEAVY PLATES COPIA CONFORME ALL'ORIGINALE

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
	0.2	1.6	0.55	0.025	0.025	0.3	0.3	0.55	0.02 0.3	0.08	0.06	0.1	0.05	0.012	0.45
24E6011132	.150	1.430	.200	.0020	.0160	.031	.009	.028	.032	.0020	.028	.002	.0030	.0030	.40
24E6011134	.150	1.430	.200	.0020	.0160	.031	.009	.028	.032	.0020	.028	.002	.0030	.0030	.40
24E6011136	.150	1.430	.200	.0020	.0160	.031	.009	.028	.032	.0020	.028	.002	.0030	.0030	.40

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kvª [J]	TESTN
					20 20	470 630	345	20					-60 -20	27	27	27		
24E6011132	P	1	P	T	20	551	418	27.3	1	P	L	10.0	-20	198	196	233	209	24-3468
24E6011134	P	1	P	T	20	551	418	27.3	1	P	L	10.0	-20	198	196	233	209	24-3468
24E6011136	P	1	P	T	20	551	418	27.3	1	P	L	10.0	-20	198	196	233	209	24-3468

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-2

posco

Mill Test Certificate

Certificate No. : 231010-FP01PS-0004A1-0015
Date of Issue : Oct., 10, 2023

Order No. : 01S6326280
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N: N IS NORMALIZING ROLLING

Size	Product No.	Quantity	Weight (kg)	Heat No.	Country of Melt & Pour	Position	Tensile Test YP (MPa)	Tensile Test TS (MPa)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)
12x2500x12000	PB86288801-8805	5	14,130	SB85186	KOR	T	448	571	27	1: 305 2: 209 3: 284 A: 266	L P	0.1563 0.1507	0.345 0.336	1.384 1.372	0.0119 0.0094	0.0022 0.0014	0.027 0.027	0.011 0.010	0 0	0.013 0.012	0.004 0.013	34 25	0.024 0.023	0.0122 0.0124
12x2500x12000	PB86287801-7803	3	8,478	SB85186	KOR	T	437	568	28	1: 269 2: 213 3: 249 A: 244	L P	0.1563 0.1507	0.345 0.336	1.384 1.372	0.0119 0.0094	0.0022 0.0014	0.027 0.027	0.011 0.010	0 0	0.013 0.012	0.004 0.013	34 25	0.024 0.023	0.0122 0.0124
12x2500x12000	PB86287805	1	2,826	SB85186	KOR	T	437	568	28	1: 269 2: 213 3: 249 A: 244	L P	0.1563 0.1507	0.345 0.336	1.384 1.372	0.0119 0.0094	0.0022 0.0014	0.027 0.027	0.011 0.010	0 0	0.013 0.012	0.004 0.013	34 25	0.024 0.023	0.0122 0.0124
12x2500x12000	PB86287901-7905	5	14,130	SB85186	KOR	T	437	568	28	1: 269 2: 213 3: 249 A: 244	L P	0.1563 0.1507	0.345 0.336	1.384 1.372	0.0119 0.0094	0.0022 0.0014	0.027 0.027	0.011 0.010	0 0	0.013 0.012	0.004 0.013	34 25	0.024 0.023	0.0122 0.0124
*** Sub Total (100) ***		56	158,256 (kg)																					
*** Heat Treatment ===> Normalizing rolling ***												CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5												
18x2500x12000	PB86199001-9005	5	21,195	SB84906	KOR	T	408	541	30	1: 272 2: 262 3: 241 A: 258	L P	0.1547 0.1505	0.357 0.347	1.389 1.378	0.0109 0.0110	0.0013 0.0016	0.021 0.026	0.009 0.010	0 0	0.013 0.011	0.003 0.012	31 28	0.024 0.023	0.0132 0.0127

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A。(Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 mmX10 mm
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

DDT.81086667
N.1 FOGLIO 12X2500X12000

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

EUSIDER HEAVY PLATES COPIA CONFORME ALL'ORIGINALE

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

posco

Mill Test Certificate

Certificate No. : 231010-FP01PS-0004A1-0015
Date of Issue : Oct., 10, 2023

Order No. : 01S6326280
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N: N IS NORMALIZING ROLLING

Product No.	Division	V (%)	Sol-Al (%)	CEQ (%)	
PB86288801-8805	L	0.003	0.035	0.40	
	P	0.003	0.034		
PB86287801-7803	L	0.003	0.035	0.40	
	P	0.003	0.034		
PB86287805	L	0.003	0.035	0.40	
	P	0.003	0.034		
PB86287901-7905	L	0.003	0.035	0.40	
	P	0.003	0.034		
*** Sub Total (100) ***				56	158,256 (kg)
PB86199001-9005	L	0.003	0.037	0.39	
	P	0.004	0.037		

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B.S. Kim

CE marking information

Certificate No. : 231010-FP01PS-0004A1-0015
Date of Issue : Oct., 10, 2023

Order No. : 01S6326280
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N: N IS NORMALIZING ROLLING

Product No.	CE 2814	POSCO Co., Ltd - Pohang Works 6262, Donghaean-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, 37877, Korea 09 2814/CPR/0038/CPR/M U M/0910016/1
PB86288801-8805 PB86287801-7803 PB86287805 PB86287901-7905 PB86199001-9005	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** **Impact strength :** **Weldability :** **Durability :** : **EN10025-2** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

posco

Mill Test Certificate

Certificate No. : 231010-FP01PS-0003A2-0001
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Country of Melt & Pour	Position	Tensile Test YP (MPa)	Tensile Test TS (MPa)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)
10x2500x12000	PC16115601-5603	3	7,065	SF71556	KOR	T	435	556	29	1: 143 2: 138 3: 130 A: 137	L P	0.1528 0.1554	0.346 0.343	1.364 1.364	0.0105 0.0103	0.0017 0.0020	0.019 0.020	0.013 0.014	0 1	0.016 0.016	0.006 0.006	34 33	0.022 0.022	0.0124 0.0123
10x2500x12000	PC16115501-5502	2	4,710	SF71556	KOR	T	429	553	29	1: 142 2: 189 3: 107 A: 146	L P	0.1528 0.1554	0.346 0.343	1.364 1.364	0.0105 0.0103	0.0017 0.0020	0.019 0.020	0.013 0.014	0 1	0.016 0.016	0.006 0.006	34 33	0.022 0.022	0.0124 0.0123
10x2500x12000	PC16118001-8003	3	7,065	SF71556	KOR	T	442	564	27	1: 61 2: 128 3: 171 A: 120	L P	0.1528 0.1554	0.346 0.343	1.364 1.364	0.0105 0.0103	0.0017 0.0020	0.019 0.020	0.013 0.014	0 1	0.016 0.016	0.006 0.006	34 33	0.022 0.022	0.0124 0.0123
10x2500x12000	PC16118101-8103	3	7,065	SF71556	KOR	T	442	564	27	1: 61 2: 128 3: 171 A: 120	L P	0.1528 0.1554	0.346 0.343	1.364 1.364	0.0105 0.0103	0.0017 0.0020	0.019 0.020	0.013 0.014	0 1	0.016 0.016	0.006 0.006	34 33	0.022 0.022	0.0124 0.0123
10x2500x12000	PC16118201-8203	3	7,065	SF71556	KOR	T	442	564	27	1: 61 2: 128 3: 171 A: 120	L P	0.1528 0.1554	0.346 0.343	1.364 1.364	0.0105 0.0103	0.0017 0.0020	0.019 0.020	0.013 0.014	0 1	0.016 0.016	0.006 0.006	34 33	0.022 0.022	0.0124 0.0123
10x2500x12000	PC16115701-5703	3	7,065	SF71557	KOR	T	450	565	28	1: 113 2: 152 3: 122 A: 129	L P	0.1547 0.1599	0.353 0.347	1.385 1.382	0.0116 0.0117	0.0014 0.0021	0.024 0.022	0.009 0.010	0 1	0.013 0.011	0.003 0.004	38 32	0.024 0.024	0.0111 0.0122

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A。(Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Sub-Size : 10 ㎜X7.5 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

DDT.81086667
N.3 FOGLI 10X2500X12000

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

EUSIDER HEAVY PLATES COPIA CONFORME ALL'ORIGINALE

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B.S. Kim

Mill Test Certificate

Certificate No. : 231010-FP01PS-0003A2-0001
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	V (%)	Sol-Al (%)	Total-Al (%)	CEQ (%)
PC16115601-5603	L	0.002	0.025	0.026	0.39
	P	0.002	0.027	0.028	
PC16115501-5502	L	0.002	0.025	0.026	0.39
	P	0.002	0.027	0.028	
PC16118001-8003	L	0.002	0.025	0.026	0.39
	P	0.002	0.027	0.028	
PC16118101-8103	L	0.002	0.025	0.026	0.39
	P	0.002	0.027	0.028	
PC16118201-8203	L	0.002	0.025	0.026	0.39
	P	0.002	0.027	0.028	
PC16115701-5703	L	0.002	0.034	0.034	0.39
	P	0.002	0.033	0.034	

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

posco

CE marking information

Certificate No. : 231010-FP01PS-0003A2-0001
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Product No.	CE 2814	POSCO Co., Ltd - Pohang Works 6262, Donghaean-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, 37877, Korea 09 2814/CPR/0038/CPR/M U M/0910016/1
PC16115601-5603 PC16115501-5502 PC16118001-8003 PC16118101-8103 PC16118201-8203 PC16115701-5703	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** : **EN10025-2** **Impact strength :** **Weldability :** **Durability :** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

Mill Test Certificate

Certificate No. : 231010-FP01PS-0003A2-0002
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Country of Melt & Pour	Position	Tensile Test YP (MPa)	Tensile Test TS (MPa)	Tensile Test EL (%)	Impact Test V Notch -20 °C Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)
10x2500x12000	PC16115801-5803	3	7,065	SF71557	KOR	T	450	565	28	1: 113 2: 152 3: 122 A: 129	L P	0.1547 0.1599	0.353 0.347	1.385 1.382	0.0116 0.0117	0.0014 0.0021	0.024 0.022	0.009 0.010	0 1	0.013 0.011	0.003 0.004	38 32	0.024 0.024	0.0111 0.0122
10x2500x12000	PC16115901-5903	3	7,065	SF71557	KOR	T	450	565	28	1: 113 2: 152 3: 122 A: 129	L P	0.1547 0.1599	0.353 0.347	1.385 1.382	0.0116 0.0117	0.0014 0.0021	0.024 0.022	0.009 0.010	0 1	0.013 0.011	0.003 0.004	38 32	0.024 0.024	0.0111 0.0122
10x2500x12000	PC16115402	1	2,355	SF71581	KOR	T	432	555	28	1: 190 2: 172 3: 179 A: 180	L P	0.1617 0.1581	0.348 0.344	1.408 1.391	0.0101 0.0103	0.0020 0.0019	0.020 0.019	0.008 0.009	1 1	0.009 0.009	0.001 0.003	37 32	0.021 0.022	0.0125 0.0128
10x2500x12000	PC16360601-0602	2	4,710	SF71849	KOR	T	436	568	27	1: 129 2: 148 3: 116 A: 131	L P	0.1540 0.1573	0.367 0.356	1.397 1.407	0.0096 0.0103	0.0010 0.0012	0.025 0.024	0.019 0.015	0 1	0.027 0.023	0.004 0.005	35 33	0.023 0.023	0.0121 0.0133
10x2500x12000	PC16360701-0703	3	7,065	SF71849	KOR	T	436	568	27	1: 129 2: 148 3: 116 A: 131	L P	0.1540 0.1573	0.367 0.356	1.397 1.407	0.0096 0.0103	0.0010 0.0012	0.025 0.024	0.019 0.015	0 1	0.027 0.023	0.004 0.005	35 33	0.023 0.023	0.0121 0.0133
10x2500x12000	PC16932501	1	2,355	SF72787	KOR	T	453	584	27	1: 181 2: 181 3: 146 A: 169	L P	0.1605 0.1588	0.358 0.358	1.404 1.416	0.0109 0.0106	0.0019 0.0019	0.032 0.031	0.012 0.013	0 1	0.015 0.016	0.003 0.005	33 37	0.023 0.022	0.0119 0.0113

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 $\sqrt{A_o}$ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Sub-Size : 10 mmX7.5 mm
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

DDT.81086667
N.1 FOGLIO 10X2500X12000

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

EUSIDER HEAVY PLATES COPIA CONFORME ALL'ORIGINALE

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

posco

Mill Test Certificate

Certificate No. : 231010-FP01PS-0003A2-0002
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	V (%)	Sol-Al (%)	Total-Al (%)	CEQ (%)
PC16115801-5803	L	0.002	0.034	0.034	0.39
	P	0.002	0.033	0.034	
PC16115901-5903	L	0.002	0.034	0.034	0.39
	P	0.002	0.033	0.034	
PC16115402	L	0.002	0.034	0.035	0.40
	P	0.002	0.032	0.035	
PC16360601-0602	L	0.002	0.037	0.039	0.40
	P	0.002	0.034	0.035	
PC16360701-0703	L	0.002	0.037	0.039	0.40
	P	0.002	0.034	0.035	
PC16932501	L	0.003	0.032	0.033	0.40
	P	0.003	0.030	0.031	

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
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We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
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Surveyor To :

B. S. Kim

posco

CE marking information

Certificate No. : 231010-FP01PS-0003A2-0002
Date of Issue : Oct., 10, 2023

Order No. : 01S6272146
PO No. : HS-SZ-230621
Supplier : HYOSUNG TNC CORPORATION
Commodity : STEEL PLATE
Customer : SALZGITTER MANNESMANN INTERNAT
Spec & Type : EN10025-2 S355J2+N

Product No.	CE 2814	POSCO Co., Ltd - Pohang Works 6262, Donghaean-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, 37877, Korea 09 2814/CPR/0038/CPR/M U M/0910016/1
PC16115801-5803 PC16115901-5903 PC16115402 PC16360601-0602 PC16360701-0703 PC16932501	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** **Impact strength :** **Weldability :** **Durability :** : **EN10025-2** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000284	123A90A	Q012400073

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **22.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27849/2

28.07.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

Total weight:	Total Length:	Pieces	Bundles
3.724 tons - lbs	70.14 meters - feets	6	1

SEAMLESS STEEL LINE PIPES

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230436

Contract 50005848

Dimensions: 219.10 x 10.31 mm
-

Schedule: 60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
2300010		Heat analysis		0.15	1.24	0.20	0.002	0.010	0.02	0.02	0.01	0.029	0.00	0.066	0.001	0.002	0.0005	0.0044
2300010	23-439	Product analysis		0.15	1.25	0.20	0.002	0.008	0.02	0.02	0.01	0.032	0.00	0.065	0.001	0.001	0.0004	0.0043
2300010	23-439	Product analysis		0.14	1.26	0.20	0.002	0.009	0.02	0.03	0.01	0.031	0.00	0.064	0.001	0.001	0.0005	0.0045

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
2300010		Heat analysis		6.59	0.067	0.069	0.100	0.38	0.03
2300010	23-439	Product analysis		7.44	0.066	0.067	0.097	0.38	0.03
2300010	23-439	Product analysis		6.89	0.065	0.066	0.096	0.37	0.03

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 03/08/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27849/2

28.07.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
3.724 tons - lbs	70.14 meters - feets	6	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230436

Contract 50005848

Dimensions: 219.10 x 10.31 mm
-

Schedule: 60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
2300010	Longitudinal Flat	50.8	-	40.00	-	11.50	-	460.0	-	23-2170	425.00	-	532.00	-	42.60	0.80
2300010	Longitudinal Flat	50.8	-	40.00	-	10.90	-	436.0	-	23-2170	421.00	-	529.00	-	41.90	0.80
2300010	Longitudinal Flat	-	-	20.00	-	11.20	-	224.0	-	23-1259	422.30	-	528.10	-	38.30	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
2300010	23-2848	Transversal	10x7.5x55	0	-	144	127	153	20.0	141	-	-	-	95	90	95	1.27	1.11	1.36
2300010	23-2849	Longitudinal	10x7.5x55	-52	20.0	160	149	172	30.0	160	-	-	-	95	95	95	1.42	1.33	1.54

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
2300010	23-1873	-	-	-	-	-	-	-	<20
2300010	23-1873	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 03/08/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27849/2

28.07.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
3.724 tons - lbs	70.14 meters - feets	6	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230436

Contract 50005848

Dimensions: 219.10 x 10.31 mm
-

Schedule: 60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
2300010	23-724	450	293.20	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
2300010	23-2075	OK
2300010	23-2075	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
2300010	23-390	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
2300010	6	70.14	3724

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 03/08/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -					Page 4/4 **B 27849/2** **28.07.2023**	ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 3.724 tons - lbs	Total Length: 70.14 meters - feets Pieces: 6 Bundles: 1
Buyer's reference: PO NO. : OF230436 **Contract 50005848**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;						
	Dimensions: 219.10 x 10.31 mm -	Schedule: 60				Length: 10.00 - 11.80 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
13	-		205	-	20.5	5	

Remarks

PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 7 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 03/08/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1223476		Heat analysis		0.15	1.21	0.20	0.004	0.012	0.07	0.10	0.19	0.027	0.01	0.070	0.003	0.001	0.0004	0.0070
1223477		Heat analysis		0.14	1.24	0.21	0.004	0.013	0.06	0.10	0.20	0.026	0.01	0.068	0.003	0.002	0.0004	0.0070
1223482		Heat analysis		0.13	1.23	0.20	0.004	0.012	0.07	0.10	0.19	0.027	0.01	0.069	0.003	0.001	0.0004	0.0050
1223616		Heat analysis		0.14	1.25	0.22	0.004	0.012	0.06	0.11	0.18	0.033	0.01	0.070	0.002	0.002	0.0004	0.0040
1223617		Heat analysis		0.14	1.28	0.21	0.003	0.013	0.06	0.10	0.17	0.030	0.01	0.069	0.003	0.002	0.0004	0.0028
1223619		Heat analysis		0.14	1.25	0.22	0.004	0.012	0.06	0.11	0.18	0.033	0.01	0.070	0.002	0.002	0.0004	0.0040
2300011		Heat analysis		0.14	1.23	0.21	0.002	0.009	0.02	0.02	0.01	0.034	0.00	0.065	0.001	0.002	0.0005	0.0046
2300014		Heat analysis		0.14	1.25	0.19	0.001	0.010	0.02	0.02	0.01	0.031	0.00	0.066	0.001	0.002	0.0005	0.0042
2300015		Heat analysis		0.15	1.24	0.20	0.001	0.011	0.01	0.02	0.01	0.027	0.00	0.065	0.001	0.002	0.0005	0.0042
2300016		Heat analysis		0.15	1.25	0.21	0.002	0.010	0.02	0.02	0.01	0.029	0.00	0.064	0.001	0.001	0.0005	0.0044
64861		Heat analysis		0.13	1.20	0.20	0.005	0.015	0.10	0.09	0.19	0.028	0.02	0.060	0.001	0.001	0.0003	0.0083
1223476	23-272	Product analysis		0.14	1.23	0.22	0.004	0.011	0.06	0.10	0.19	0.030	0.01	0.068	0.002	0.001	0.0003	0.0069
1223476	23-272	Product analysis		0.15	1.22	0.22	0.004	0.010	0.06	0.09	0.18	0.030	0.01	0.068	0.002	0.001	0.0003	0.0071
1223477	23-231	Product analysis		0.14	1.26	0.22	0.003	0.012	0.06	0.09	0.19	0.028	0.01	0.066	0.002	0.002	0.0003	0.0071
1223477	23-231	Product analysis		0.14	1.25	0.22	0.004	0.011	0.06	0.09	0.19	0.029	0.01	0.067	0.002	0.002	0.0003	0.0073
1223482	23-272	Product analysis		0.14	1.25	0.22	0.003	0.010	0.06	0.10	0.18	0.030	0.01	0.067	0.002	0.001	0.0003	0.0054
1223482	23-272	Product analysis		0.14	1.25	0.21	0.004	0.011	0.06	0.09	0.18	0.030	0.01	0.066	0.002	0.001	0.0003	0.0053
1223616	23-105	Product analysis		0.14	1.27	0.22	0.004	0.010	0.06	0.10	0.17	0.034	0.01	0.067	0.002	0.002	0.0003	0.0044

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1223616	23-105	Product analysis		0.14	1.28	0.21	0.004	0.011	0.06	0.10	0.17	0.035	0.01	0.068	0.002	0.002	0.0003	0.0045
1223617	23-200	Product analysis		0.14	1.27	0.23	0.003	0.011	0.06	0.09	0.17	0.033	0.01	0.067	0.002	0.002	0.0003	0.0033
1223617	23-200	Product analysis		0.14	1.28	0.22	0.002	0.012	0.06	0.09	0.18	0.033	0.01	0.068	0.002	0.002	0.0003	0.0032
1223619	23-172	Product analysis		0.13	1.28	0.24	0.004	0.011	0.05	0.10	0.17	0.036	0.01	0.069	0.002	0.002	0.0003	0.0045
1223619	23-172	Product analysis		0.13	1.28	0.23	0.003	0.011	0.05	0.11	0.17	0.035	0.01	0.068	0.002	0.002	0.0003	0.0043
2300011	23-270	Product analysis		0.15	1.25	0.23	0.003	0.009	0.02	0.02	0.01	0.036	0.00	0.063	0.001	0.002	0.0004	0.0046
2300011	23-270	Product analysis		0.14	1.25	0.22	0.003	0.010	0.02	0.02	0.01	0.037	0.00	0.064	0.001	0.002	0.0004	0.0048
2300014	23-270	Product analysis		0.14	1.27	0.20	0.001	0.008	0.02	0.01	0.01	0.033	0.00	0.064	0.001	0.002	0.0004	0.0045
2300014	23-270	Product analysis		0.14	1.28	0.21	0.001	0.009	0.02	0.01	0.01	0.033	0.00	0.065	0.001	0.002	0.0004	0.0043
2300015	23-270	Product analysis		0.16	1.26	0.22	0.001	0.010	0.02	0.02	0.01	0.030	0.00	0.064	0.001	0.002	0.0004	0.0041
2300015	23-270	Product analysis		0.15	1.27	0.22	0.001	0.010	0.02	0.03	0.01	0.029	0.00	0.065	0.001	0.002	0.0004	0.0043
2300016	23-270	Product analysis		0.15	1.26	0.23	0.002	0.011	0.02	0.02	0.01	0.031	0.00	0.063	0.001	0.002	0.0004	0.0048
2300016	23-270	Product analysis		0.16	1.26	0.22	0.002	0.010	0.02	0.02	0.01	0.032	0.00	0.062	0.001	0.002	0.0004	0.0047
64861	21-370	Product analysis		0.14	1.20	0.21	0.004	0.015	0.11	0.09	0.18	0.026	0.02	0.060	0.002	0.001	0.0002	0.0081
64861	21-370	Product analysis		0.14	1.20	0.21	0.005	0.015	0.11	0.09	0.18	0.027	0.02	0.060	0.002	0.001	0.0002	0.0078

Chemical Analysis(%)

Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
1223476		Heat analysis		3.86	0.073	0.074	0.345	0.40	0.27
1223477		Heat analysis		3.71	0.071	0.073	0.345	0.39	0.27
1223482		Heat analysis		5.40	0.072	0.073	0.346	0.38	0.27
1223616		Heat analysis		8.25	0.072	0.074	0.328	0.40	0.25
1223617		Heat analysis		10.71	0.072	0.074	0.317	0.40	0.24
1223619		Heat analysis		8.25	0.072	0.074	0.328	0.40	0.25
2300011		Heat analysis		7.39	0.066	0.068	0.099	0.36	0.03
2300014		Heat analysis		7.38	0.067	0.069	0.097	0.37	0.03
2300015		Heat analysis		6.43	0.066	0.068	0.093	0.37	0.03
2300016		Heat analysis		6.59	0.065	0.066	0.093	0.38	0.03
64861		Heat analysis		3.37	0.061	0.062	0.372	0.38	0.31
1223476	23-272	Product analysis		4.35	0.070	0.071	0.331	0.39	0.26
1223476	23-272	Product analysis		4.23	0.070	0.071	0.321	0.40	0.25
1223477	23-231	Product analysis		3.94	0.068	0.070	0.330	0.40	0.26
1223477	23-231	Product analysis		3.97	0.069	0.071	0.331	0.39	0.26
1223482	23-272	Product analysis		5.56	0.069	0.070	0.320	0.39	0.25
1223482	23-272	Product analysis		5.66	0.068	0.069	0.319	0.39	0.25
1223616	23-105	Product analysis		7.73	0.069	0.071	0.311	0.40	0.24

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

SEAMLESS STEEL LINE PIPES

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
1223616	23-105	Product analysis		7.78	0.070	0.072	0.312	0.40	0.24
1223617	23-200	Product analysis		10.00	0.069	0.071	0.311	0.40	0.24
1223617	23-200	Product analysis		10.31	0.070	0.072	0.322	0.40	0.25
1223619	23-172	Product analysis		8.00	0.071	0.073	0.303	0.39	0.23
1223619	23-172	Product analysis		8.14	0.070	0.072	0.302	0.39	0.23
2300011	23-270	Product analysis		7.83	0.064	0.066	0.096	0.38	0.03
2300011	23-270	Product analysis		7.71	0.065	0.067	0.097	0.37	0.03
2300014	23-270	Product analysis		7.33	0.065	0.067	0.097	0.37	0.03
2300014	23-270	Product analysis		7.67	0.066	0.068	0.098	0.37	0.03
2300015	23-270	Product analysis		7.32	0.065	0.067	0.097	0.39	0.03
2300015	23-270	Product analysis		6.74	0.066	0.068	0.098	0.38	0.03
2300016	23-270	Product analysis		6.46	0.064	0.066	0.096	0.38	0.03
2300016	23-270	Product analysis		6.81	0.063	0.065	0.095	0.39	0.03
64861	21-370	Product analysis		3.21	0.062	0.063	0.373	0.40	0.31
64861	21-370	Product analysis		3.46	0.062	0.063	0.373	0.40	0.31

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1223476	Longitudinal Flat	50.8	-	40.00	-	7.90	-	316.0	-	23-869	424.00	-	533.00	-	41.20	0.80
1223476	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-869	420.00	-	526.00	-	39.70	0.80
1223476	Longitudinal Flat	-	-	20.00	-	7.70	-	154.0	-	23-505	422.10	-	528.60	-	36.90	0.80
1223477	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-854	423.00	-	529.00	-	40.60	0.80
1223477	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-854	425.00	-	532.00	-	41.10	0.80
1223477	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-869	419.00	-	525.00	-	39.60	0.80
1223477	Longitudinal Flat	-	-	20.00	-	7.80	-	156.0	-	23-491	422.40	-	529.50	-	36.00	0.80
1223482	Longitudinal Flat	50.8	-	40.00	-	7.60	-	304.0	-	23-854	423.00	-	529.00	-	40.80	0.80
1223482	Longitudinal Flat	50.8	-	40.00	-	7.40	-	296.0	-	23-854	420.00	-	527.00	-	40.30	0.80
1223482	Longitudinal Flat	-	-	20.00	-	7.60	-	152.0	-	23-491	421.10	-	527.00	-	34.90	0.80
1223616	Longitudinal Flat	50.8	-	40.00	-	7.40	-	296.0	-	23-924	420.00	-	526.00	-	40.40	0.80
1223616	Longitudinal Flat	50.8	-	40.00	-	7.70	-	308.0	-	23-924	423.00	-	527.00	-	41.40	0.80
1223616	Longitudinal Flat	-	-	20.00	-	7.50	-	150.0	-	23-538	418.00	-	524.70	-	32.90	0.80
1223617	Longitudinal Flat	50.8	-	40.00	-	7.90	-	316.0	-	23-869	423.00	-	531.00	-	41.20	0.80
1223617	Longitudinal Flat	50.8	-	40.00	-	7.60	-	304.0	-	23-869	420.00	-	526.00	-	39.90	0.80
1223617	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-924	422.00	-	526.00	-	41.10	0.80
1223617	Longitudinal Flat	-	-	20.00	-	7.50	-	150.0	-	23-505	420.70	-	525.30	-	32.90	0.80
1223619	Longitudinal Flat	50.8	-	40.00	-	7.70	-	308.0	-	23-869	423.00	-	529.00	-	40.30	0.80
1223619	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-869	421.00	-	527.00	-	40.10	0.80
1223619	Longitudinal Flat	-	-	20.00	-	7.80	-	156.0	-	23-505	423.10	-	531.40	-	37.40	0.80

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Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
2300011	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-854	419.00	-	527.00	-	39.80	0.80
2300011	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-854	423.00	-	530.00	-	40.50	0.80
2300011	Longitudinal Flat	-	-	20.00	-	7.60	-	152.0	-	23-491	420.40	-	528.30	-	36.30	0.80
2300014	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-869	423.00	-	530.00	-	40.90	0.80
2300014	Longitudinal Flat	50.8	-	40.00	-	7.40	-	296.0	-	23-869	419.00	-	524.00	-	39.30	0.80
2300014	Longitudinal Flat	-	-	20.00	-	7.30	-	146.0	-	23-505	416.40	-	523.30	-	33.20	0.80
2300015	Longitudinal Flat	50.8	-	40.00	-	7.60	-	304.0	-	23-869	421.00	-	527.00	-	40.20	0.80
2300015	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-869	423.00	-	528.00	-	40.70	0.80
2300015	Longitudinal Flat	50.8	-	40.00	-	7.60	-	304.0	-	23-924	419.00	-	525.00	-	40.20	0.80
2300015	Longitudinal Flat	-	-	20.00	-	7.40	-	148.0	-	23-505	418.20	-	524.30	-	33.90	0.80
2300016	Longitudinal Flat	50.8	-	40.00	-	7.80	-	312.0	-	23-869	423.00	-	529.00	-	40.50	0.80
2300016	Longitudinal Flat	50.8	-	40.00	-	7.40	-	296.0	-	23-869	417.00	-	524.00	-	39.30	0.80
2300016	Longitudinal Flat	-	-	20.00	-	7.60	-	152.0	-	23-505	421.10	-	527.00	-	34.90	0.80
64861	Longitudinal Flat	50.8	-	40.00	-	7.50	-	300.0	-	23-924	419.00	-	524.00	-	39.20	0.80
64861	Longitudinal Flat	-	-	20.00	-	7.80	-	156.0	-	23-538	422.40	-	526.90	-	34.60	0.80

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Quality Control Representative

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Approved by QUALITY1 on 13/04/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1223476	23-1119	Longitudinal	10x5x55	-52	14.0	101	109	113	20.0	108	-	-	-	90	90	90	0.86	0.93	0.97
1223477	23-1090	Longitudinal	10x5x55	-52	14.0	103	110	117	20.0	110	-	-	-	90	90	90	0.88	0.95	1.01
1223482	23-1090	Longitudinal	10x5x55	-52	14.0	121	114	108	20.0	114	-	-	-	90	90	90	1.05	0.98	0.93
1223616	23-1185	Longitudinal	10x5x55	-52	14.0	94	88	90	20.0	91	-	-	-	90	90	90	0.72	0.66	0.68
1223617	23-1119	Longitudinal	10x5x55	-52	14.0	98	105	112	20.0	105	-	-	-	90	90	90	0.83	0.90	0.96
1223619	23-1119	Longitudinal	10x5x55	-52	14.0	117	122	108	20.0	116	-	-	-	90	90	90	1.01	1.06	0.93
2300011	23-1090	Longitudinal	10x5x55	-52	14.0	102	109	118	20.0	110	-	-	-	90	90	90	0.87	0.94	1.01
2300014	23-1119	Longitudinal	10x5x55	-52	14.0	102	96	111	20.0	103	-	-	-	90	90	90	0.87	0.82	0.96
2300015	23-1119	Longitudinal	10x5x55	-52	14.0	101	108	115	20.0	108	-	-	-	90	90	90	0.86	0.93	0.99
2300016	23-1119	Longitudinal	10x5x55	-52	14.0	110	114	97	20.0	107	-	-	-	90	90	90	0.95	0.98	0.82
64861	23-1185	Longitudinal	10x5x55	-52	14.0	96	102	92	20.0	97	-	-	-	90	90	90	0.75	0.81	0.71

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1223476	23-758	-	-	-	-	-	-	-	<20
1223476	23-758	-	-	-	-	-	-	-	<20
1223477	23-742	-	-	-	-	-	-	-	<20
1223477	23-742	-	-	-	-	-	-	-	<20
1223482	23-742	-	-	-	-	-	-	-	<20

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Quality Control Representative

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Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1223482	23-742	-	-	-	-	-	-	-	<20
1223616	23-811	-	-	-	-	-	-	-	<20
1223616	23-811	-	-	-	-	-	-	-	<20
1223617	23-758	-	-	-	-	-	-	-	<20
1223617	23-758	-	-	-	-	-	-	-	<20
1223619	23-758	-	-	-	-	-	-	-	<20
1223619	23-758	-	-	-	-	-	-	-	<20
2300011	23-742	-	-	-	-	-	-	-	<20
2300011	23-742	-	-	-	-	-	-	-	<20
2300014	23-758	-	-	-	-	-	-	-	<20
2300014	23-758	-	-	-	-	-	-	-	<20
2300015	23-758	-	-	-	-	-	-	-	<20
2300015	23-758	-	-	-	-	-	-	-	<20
2300016	23-758	-	-	-	-	-	-	-	<20
2300016	23-758	-	-	-	-	-	-	-	<20
64861	23-811	-	-	-	-	-	-	-	<20
64861	23-811	-	-	-	-	-	-	-	<20

Yield Strength Test

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1223476	23-301	450	302.60	-
1223477	23-290	450	303.60	-
1223482	23-290	450	298.50	-
1223616	23-317	450	297.30	-
1223617	23-301	450	296.40	-
1223619	23-301	450	297.00	-
2300011	23-290	450	301.10	-
2300014	23-301	450	295.10	-
2300015	23-301	450	303.60	-
2300016	23-301	450	296.80	-
64861	23-317	450	302.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1223476	23-814	OK
1223476	23-814	OK
1223477	23-776	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1223476	23-189	0	10
1223477	23-183	0	9
1223482	23-183	0	9
1223616	23-193	0	10

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Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

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B 27170/1

31.03.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
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Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Technological/Microstructure Test

1223477	23-776	OK
1223477	23-794	OK
1223482	23-776	OK
1223482	23-776	OK
1223616	23-849	OK
1223616	23-849	OK
1223617	23-814	OK
1223617	23-814	OK
1223617	23-849	OK
1223619	23-814	OK
1223619	23-814	OK
2300011	23-776	OK
2300011	23-776	OK
2300014	23-814	OK
2300014	23-814	OK
2300015	23-814	OK
2300015	23-814	OK

1223617	23-189	0	10
1223619	23-189	0	10
2300011	23-183	0	9
2300014	23-189	0	10
2300015	23-188	0	9
2300016	23-188	0	9

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Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Technological/Microstructure Test

2300015	23-849	OK
2300016	23-814	OK
2300016	23-814	OK
64861	23-849	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
1223476	23	254.65	7196
1223477	36	397.78	11242
1223482	1	10.72	303
1223616	4	45.44	1285
1223617	6	69.54	1965
1223619	4	46.00	1300
2300011	1	11.73	331
2300014	3	34.80	984
2300015	35	406.15	11481
2300016	1	11.58	327
64861	1	11.60	328

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SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
36.742 tons - lbs	1 299.99 meters - feets	115	26

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175 Part 1 & 2 -2021

Buyer's reference: PO NO. : OF230204

Contract 50005750

Dimensions: 168.30 x 7.11 mm
-

Schedule: STD/40

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
4	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks

PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source lnterpipe Europe SA(Producator: Dneprosteel Ucraina) Via San Salvatore 13, PO Box 745 CH-6902 PARADISO-LUGANO SWITZERLAND , Jindal Shadeed lron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman,, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 4 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/04/23

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **80062/24**

A07	Customer's Order (P.O.) No./Item No.: **OF230749**	A08	Manufacturer's Works Order No.: **59506/0/23**
A11	Supplier's Order No.: **3151031845**	A10	Advice - Note No.: **8151009225**
B08, B12/13	Quantity delivered: pcs / bdls: **32**; mtrs / feet: **369,090**; B13 Actual mass kgs / lbs: **15956**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **219,08 X 8,18 mm (8" SCH40)**		
B02	Steel designation: **L360N/X52N PSL2 Grade 6 P355NL1**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes, ASME B36.10M-22,
ASTM A999/A999M-18, ASME SA999/SA999M-23, ASME SA333/SA333M-23,
API Spec.5L-46th edit.18 PSL2, EN 10216-3/13 TC1 , ASTM A333/A333M-18, - PED 2014/68/EU.
ANSI/NACE MR0175-2021/ISO 15156-2:2020, ANSI/NACE MR0103-2015/ISO 17945:2015 (R2023). ASME Sec.II, Part.D, Table Y-1.
Normalized (860 – 945°C) **TS02 Rev. 07 for T.A.L. LAST REV.**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) — C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ
57488K	**H**	**0,14**	**1,28**	**0,286**	**0,013**	**0,003**	**0,06**	**0,03**	**0,05**	**0,023**	**0,0105**	**0,007**	**0,064**	**0,002**	**0,001**	**0,0003**	**0,38**
	P	0,14	1,23	0,284	0,013	0,003	0,06	0,03	0,05	0,023	0,0107	0,007	0,063	0,002	0,001	0,0004	0,38
	P	0,14	1,25	0,287	0,013	0,003	0,06	0,03	0,05	0,025	0,0101	0,007	0,064	0,002	0,002	0,0003	0,37

Z99 ☐

Test results:

B07 Heat No. C00 Specimen No. / C04 Requirements:		MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact test	HRB C30-32 Hardness
L360N/X52N Grade 6 P355NL1		**360 - 530**	**460 - 760**	**min. 25,0** (2")	**A) L-7,5-30J/ -52°C**	**max. 99**
		min. 240	**min. 415**	**min. 30,0** (2")	**B) INF. Shear area (%)**	
		min. 355	**490 - 650**	**min. 22,0** (5d)	**C) L-7,5-30J / -40°C**	
		Longitudinal strip specimen 38,1 mm			Ø / min	
57488K/1	**L360N/X52N** 73936	**424**	**549**	**38,4**	**A) 160** **178 152 150**	**82 85**
	Gr.6 73896	**427**	**546**	**38,1**	**B) 100** **100 100 100**	
	P355NL1 73916	**434**	**542**	**27,9**	**C) 163** **163 164 162**	

Z99 ☐

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec	**20,2 / 10**
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing flux - leakage **notch 12.5%**	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X		acc. to **ASTM E570** - longitudinal imperfections **– satisfactory**	X

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018.

Z99 X continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **24.01.2024/LB**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4
58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by S.COZZANI on 24/01/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724000284 123A90 TAL JOB N°324000365
N° 3 MT 34,36 HEAT 57488K DIMENSIONS 219,1 x 8,18

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **80062/24**

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
22HRC=99HRBmax. **Residual magnetic field [mT] max.3- satisfactory.**
MANUFACTURER OF BILLETS: LIBERTY OSTRAVA
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties at elevated temperatures for gr. 6 as per ASTM A333/A333M-18.
Grain size min. 7 acc. ASTM E112 is guaranteed.
Elongation (A5) = min. 14% guaranteed (L0= 5.65 * $\sqrt{S0}$)

C71-92 Heat (H) and product (P) chemical analyses (%)

B07 Heat No.	C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ

B07 Test results: Heat No.	C00 Specimen No.	C11 Yield Point MPa	C12 Tensile Strength MPa	C13 Elongation %	C40-43 Impact Test	C30-32 Hardness

Z02 Date of issue **24.01.2024/LB**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4
58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by S.COZZANI on 24/01/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000284	123A90A	Q012400068

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

19.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

D 2367/1

17.09.2015

ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC
Jebel Ali Free Zone (South), P.O. Box 103921, Dubai, UAE. T +971-4-8136000 F +971-4-8136050 Email id : admin@kirtanlal.ae

SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE.

Total weight:	Total Length:	Pieces	Bundles
1.747 tons - lbs	10.93 meters - feets	1	-

Standard: API 5L ed.45-2012-PSL2; EN 10210-1&2-2006; ASME B16.25-2012; ASME B36.10M-2004; NACE MR 0103-2012; NACE MR 0175/ISO 15156 1&2-2009; ASME II part.D Table Y1; TDC No.:K.I./SMLS/52P-2 REV.04/06.01.2015

Buyer's reference: PO NO : KIP0-000015/Roman DT 28.03.2015

Contract 50002130

Dimensions: 323.80 x 21.44 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	AMR52D067

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355J2H
-

Bill: -

Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	Nb	Ti	B
			Max	0.22	1.40	0.45	0.015	0.025	0.30	0.30	0.50	0.10	0.100	0.050	0.030	0.0010
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-
52588		Heat analysis		0.13	1.23	0.30	0.004	0.011	0.08	0.10	0.10	0.01	0.060	0.001	0.002	0.0002
52588	15-298	Product analysis		0.13	1.23	0.27	0.004	0.011	0.08	0.10	0.11	0.01	0.060	0.002	0.000	0.0000
52588	15-298	Product analysis		0.14	1.24	0.26	0.004	0.010	0.08	0.10	0.11	0.01	0.060	0.002	0.000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Nb + Ti + V	CE_IIW
			Max	0.150	0.43
			Min	-	-
52588		Heat analysis		0.063	0.38
52588	15-298	Product analysis		0.062	0.38
52588	15-298	Product analysis		0.062	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal 12/88/91 ★★★ România

Societatea Comercială ADVERTO CONSULTING CONTROL S.R.L. Roman

Inspector/Buyer representative

Formular 12A2, rev. 3

Approved by QUALITY1 on 18/11/19

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

D 2367/1

17.09.2015

ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC
Jebel Ali Free Zone (South), P.O. Box 103921, Dubai, UAE. T +971-4-8136000 F +971-4-8136050 Email id : admin@kirtanlal.ae

SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE.

Total weight:	Total Length:	Pieces	Bundles
1.747 tons - lbs	10.93 meters - feets	1	-

Standard: API 5L ed.45-2012-PSL2; EN 10210-1&2-2006; ASME B16.25-2012; ASME B36.10M-2004; NACE MR 0103-2012; NACE MR 0175/ISO 15156 1&2-2009; ASME II part.D Table Y1; TDC No.:K.I./SMLS/52P-2 REV.04/06.01.2015

Buyer's reference: PO NO : KIP0-000015/Roman DT 28.03.2015

Contract 50002130

Dimensions: 323.80 x 21.44 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	AMR52D067

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355J2H
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
52588	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	14-343	363.00	-	512.00	-	31.40	0.71
52588	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	15-162	382.20	-	522.30	-	33.70	0.73

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
52588	15-590	Transversal	10x10x55	0	-	295	299	307	27.0	300	-	-	-	100	100	100	2.07	2.10	2.14
52588	15-591	Longitudinal	10x10x55	-20	-	293	296	276	27.0	288	-	-	-	100	100	100	2.05	2.08	1.95

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
52588	15-321	-	-	-	-	-	-	-	<22
52588	15-321	-	-	-	-	-	-	-	<22
52588	15-321	-	-	-	-	-	-	-	<22

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
52588	15-156	316	318.20	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★ România ★

Societatea Comercială ADVERTO CONSULTING Roman - Neamț

Inspector/Buyer representative

Formular 12A2, rev. 3

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 18/11/19

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

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D 2367/1
17.09.2015

ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC
Jebel Ali Free Zone (South), P.O. Box 103921, Dubai, UAE. T +971-4-8136000 F +971-4-8136050 Email id : admin@kirtanlal.ae

SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE.

Total weight:	Total Length:	Pieces	Bundles
1.747 tons - lbs	10.93 meters - feets	1	-

Standard: API 5L ed.45-2012-PSL2; EN 10210-1&2-2006; ASME B16.25-2012; ASME B36.10M-2004; NACE MR 0103-2012; NACE MR 0175/ISO 15156 1&2-2009; ASME II part.D Table Y1; TDC No.:K.I./SMLS/52P-2 REV.04/06.01.2015

Buyer's reference: PO NO : KIP0-000015/Roman DT 28.03.2015

Contract 50002130

Dimensions: 323.80 x 21.44 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	AMR52D067

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355J2H
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
52588	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★ România ★

Societatea Comercială ADVERTO CONSULTING CONTROL S.R.L. Roman - Neamț

Inspector/Buyer representative

Formular 12A2, rev. 3

Approved by QUALITY1 on 18/11/19

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004
-

Page 4/4
D 2367/1
17.09.2015

ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC
Jebel Ali Free Zone (South), P.O. Box 103921, Dubai, UAE. T +971-4-8136000 F +971-4-8136050 Email id : admin@kirtanlal.ae

SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE.

Total weight:	Total Length:	Pieces	Bundles
1.747 tons - lbs	10.93 meters - feets	1	-

Standard: API 5L ed.45-2012-PSL2; EN 10210-1&2-2006; ASME B16.25-2012; ASME B36.10M-2004; NACE MR 0103-2012; NACE MR 0175/ISO 15156 1&2-2009; ASME II part.D Table Y1; TDC No.:K.I./SMLS/52P-2 REV.04/06.01.2015

Buyer's reference: PO NO : KIP0-000015/Roman DT 28.03.2015

Contract 50002130

Dimensions: 323.80 x 21.44 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
13	AMR52D067

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52N / S355J2H
-

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 323.80 - 21.44 -

EN 10210-1-2/L360N/X52N/S355 J2H

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -15-0038/CPD/BUC 10 00067/A

Manufacturing process – hot rolling.
Hot finished, steel is fully killed and produced by electric furnace, Arcelor Mittal Hunedoara S.A.-Piata Iancu de Hunedoara,nr.1-Hunedoara.
Visual inspection and dimensional check without objection.
Steel is fully killed with a fine grain practice.
Heat treatment: normalizing at temperature of 870°C - 900°C time soaking 44 min.
NDT full body: 100% ultrasonic testing Le+Li acceptance level (12.5% from WT) - UT have been done .
Wet magnetical particles testing on the pipe ends-satisfactory.
Magnetism residual max 35 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.

STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

15
0038/CPD/BUC1000067/A

EN 10210-1-2006

Steel hollow sections for building and civil engineering

Product designation : S355J2H

Dangerous substance As: Less than 0.2 ppm

Durability - NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

ArcelorMittal Tubular Products Roman S.A. 27/88/91 ★★★ România ★

Societatea Comercială ADVERTO CONSUL CONTROL S.R.L. Roman - Neamț

Inspector/Buyer representative

Formular 12A2, rev. 3

Approved by QUALITY1 on 18/11/19

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1724000297	122A70C	Q012400143

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

20.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 1761 del 20/03/2024__P3801D__2017054

A05 | A06 | A07 | A08 2_555552+N+CET

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Empla.	Traction / Tensile requirements											Empla.			
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thicknes	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos. Z(4)	Type	Réf / Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf / Ref	Type	S (3)
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02
2017054	730316197	001	1	8,000	2000,00		21849	1	T	P	PRISM	BL	20	501	591	23,9				1	BL	KV	L-

NS. N. MATRICOLA P3801

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis					AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02	
			C%	Mn%	P%	S%	Si%																
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	
O/YCC		730316197	0,189	1,495	0,018	0,005	0,018	0,035	0,0002	0,038	0,018	0,006	0,0035	0,014	0,021	0,016	0,002				0,45	0,062	

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location (2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(6) Mode élab.Meth.Coulée: T: Thomas M: Martin; E: Electrique / Electric; O/Y: Oxy.pur / Basic oxyg.; CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pieces a titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specific of the contract and that, with inspection and tests completed, it meets those specifications as wel norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory.

FRANCHINI LAMIERE DDT Nr. 1761 del 20/03/2024__P3801D__2017054

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V01 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_I

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate		H Intende
2017054	730316197	000014	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051		Tolerances on dim Conform to EN 10
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability

FRANCHINI LAMIERE DDT Nr. 1761 del 20/03/2024__P4889D__2940033

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements										Emplacement		
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thicknes	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos. Z(4)	Type	Réf / Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf / Ref	Type
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40
2940033	730325297	001	1	8,000	2000,00		26297	1	T	P	PRISM	BL	20	468	566	25,7				1	BL	KV

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																				
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90
O/YCC		730325297	0,180	1,455	0,016	0,006	0,014	0,034	0,0001	0,028	0,009	0,014	0,0043	0,013	0,014	0,014	0,001				0,43	0,054

OTHER ELEMENTS ARE AS TRACES ONLY

1) P4889

Emplacement/Location (2)
1 Tête / Head
2 Pied / Bottom
3 1/2 longueur / Length
X:Divers / Mix
C01

(3) Sens/Direction
L:Long / Longitudinal
T:Travers / Transverse
Z:Travers court / Through thick
C02

(4) Position
C:Coeur / Core sample
P:Peau / Rolled surface
D:1/3 Epais. / Thickness
Q:1/4 Epais. / Thickness
F:1/5 Epais. / Thickness
K:Divers / Mix
C62

(6)Mode élab.Meth.Coulée
T: Thomas M: Martin
E: Electrique / Electric
O/Y: Oxy.pur / Basic oxyg.
CC: Coulée Continue / Continuous casting
C70/93

(7) Masse et nb pieces a titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical spec of the contract and that, with inspection and tests completed, it meets those specifications as v norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory.

In dem untersuchten Material wurde keine Radioaktivität gefunden. Die Messung wurde mit dem GENIE-2000-System gemacht, Hersteller: Canberra-Packard.

Wyrób budowlany oznakowany znakiem CE zgodnie z rozporządzeniem nr 305/2011 Parlamentu Europejskiego i Rady UE..
Construction product CE marked in accordance with Regulation No 305/2011 of the European Parliament and of the Council of the EU
Ein Bauprodukt, das mit dem CE-Zeichen gemäß Verordnung 305/2011 des Europäischen Parlaments und des EU-Rates versehen ist.

D01 Powierzchnia i wymiary - Sprawdzono zgodność z zamówieniem Surface and dimension - tested according to purchase order Oberfläche und Masse - Geprüft entprechend der Bestellung	Z01 Na podstawie przeprowadzonych badań uznano, że wykonany wyrób jest zgodny z warunkami zamówienia. On the basis of the tests it has been recognized that the product conforms with the order requirements. Nach der durchgeführten Prüfungen wurde festgestellt, das des Erzeugnis den Anfrderungen der Bestellung entepric
Z.04 CE 0035 0035-CPR-A150 Z.14 UKCA 0120	

ArcelorMitta

Wystawił: BKGD01

FRANCHINI LAMIERE DDT Nr. 1761 del 20/03/2024__Q0738D__H003717

FRANCHINI LAMIERE DDT Nr. 1761 del 20/03/2024 __ Q0738D __ H003717

Recipient of a certificate:
Empfänger eines Zertifikates: 25010 SAN ZENO NAVIGLIO, VIA IV NOVEMBRE 32

Włochy / Italy / Italien

Dowód dostawy/Delivery Note/Lieferschein Nr
64199686

B01, B04, B09-B11, B16

Blacha gorącowalcowana w kręgach grub.: 8,00 szer.: 2000,00 gat.stali: S355J2+N gładka czarna niewytrawiona zabezp.pow.: bez zabezpieczenia opakowanie: H04 Sta
Dokładność wykonania grubości - 3/4 normy (-0,300/+0,300)
Hot-rolled coils thickness: 8,00 width: 2000,00 steel grade: S355J2+N plain black not pickled surf.prot.: no protection packaging: H04 Delivery condition: normalizing rollin
standard (-0,300/+0,300)

B02	Norma przedmiotowa According Nach	Norma klasyfikacyjna Classification standards Materialnorm	Norma wymiarowa Tolerance standards Massnorm	Gatunek Steel grade Marke
	EN 10025-1:2004	**EN 10025-2:2019**	**EN 10051:2010**	**S355J2+N**

Specyfikacja Wyrobu - Product Specification - Produktdatenblatt : **S355J2+N-CAT_A EN10025-2:2019**

C70 Proces wytwarzania stali Steelmaking process Stahlherstellungsverfahren

Stal wytwarzana w procesie konwertorowym tlenowym Steel produced in BOF process Stahl hergestellt im Sauerstoffaufblasverfahren

B07.1 Nr partii badanej - QM Batch No - WK Los Nr	B07.2 Numer partii - Batch No - Los Nr	B0.8 Ilość sztuk - Number of pieces - Stückzahl
040011019583	**H003717**	**1**

C71-C92 Skład chemiczny - Chemical composition
C93 = CEV Chemische Zusammensetzung

B07.3 Wytop - Heat - Schmelze	C[%]	Mn[%]	Si[%]	P[%]	S[%]	Cu[%]	Cr[%]	Ni[%]	Al[%]	Al_{so}
430064	0,15	1,47	0,012	0,013	0,006	0,02	0,03	0,014	0,043	

Ti[%]	As[%]	N_2[%]	Ca[%]	Pb[%]	Sn[%]	Sb[%]	O[%]	H_2[%]	Zn[%]	W[%]	B[%]	Zr[%]	C_{EV}[%]
0,0208		0,0046	0,0017	0,0042	0,0020	0,0010			0,0015	0,0010	0,0005	0,0016	0,41

Właściwości mechaniczne - Mechanical properties - Mechanische Eigenschaften

B07.1 Nr partii badanej QM Batch No WK Los Nr	C02.1 Własności mechaniczne - kierunek Mechanical properties - direction mechanische Eigenschaften - Richtung	C03 Temperatura_badania Test temperature Prüftemperatur	C11.1 Typ Re Re type Re Typ	C11.2 Re Re Re [MPa]	C12 Rm Rm Rm [MPa]	C13.1 A A A
040011019583	T	23	ReH	460	567	A5

B07.1 Nr partii badanej QM Batch No	C41 Szerok. próbki width of probe	C02.2 Udarność - kierunek Impact test - direction	C40 Udarność - typ Impact test - type	C42.1 Praca łamania KVpróba 1 Work of fracture KVtest 1	C42.2 Praca łamania KVpróba 2 Work of fracture KVtest 2	C42.3 Praca łamania KVpróba 3 Work of fracture KVtest 3

Wystawił: BKGD01

Q0738

040011015300	7,5	L	KV2	158,0	154,0	162,0

T - Poprzeczny/ Transverse/Transversalen; L- Wzdłużny / Longitudinal/ Längslaufend; 1 - Po walcowaniu normalizującym / After normalizing rolling/Nach normalisierendes Walzen; 2 - Po normalizacji / After normalization /Nach Norma
Positiv

Badany materiał nie wykazał radioaktywności. Pomiar został wykonany przy użyciu systemu GENIE 2000, produkcja Canberra-Packard.
The tested material did not show any signs of radioactivity. The measurement was performed with the application of GENIE 2000 system, manufactured by Canberra-Packard.
In dem untersuchten Material wurde keine Radioaktivität gefunden. Die Messung wurde mit dem GENIE-2000-System gemacht, Hersteller: Canberra-Packard.

Wyrób budowlany oznakowany znakiem CE zgodnie z rozporządzeniem nr 305/2011 Parlamentu Europejskiego i Rady UE..
Construction product CE marked in accordance with Regulation No 305/2011 of the European Parliament and of the Council of the EU
Ein Bauprodukt, das mit dem CE-Zeichen gemäß Verordnung 305/2011 des Europäischen Parlaments und des EU-Rates versehen ist.

D01 Powierzchnia i wymiary - Sprawdzono zgodność z zamówieniem Surface and dimension - tested according to purchase order Oberfläche und Masse - Geprüft entprechend der Bestellung	Z01 Na podstawie przeprowadzonych badań uznano, że wykonany wyrób jest zgodny z warunkami zamówienia. On the basis of the tests it has been recognized that the product conforms with the order requirements. Nach der durchgeführten Prüfungen wurde festgestellt, das des Erzeugnis den Anfrderungen der Bestellung entepricht.
Z.04 CE 0035 0035-CPR-A150 Z.14 UKCA 0120	

ArcelorMitta

Wystawił: BKGD01

1319/ 3402

FRANCHINI LAMIERE DDT Nr. 1736 del 19/03/2024__Q0739D__H003167

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FIHI FORGING INDUSTRY S.L.	1724000344	123A90A	Q012400549

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani 16/07/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

GRI Flanges froeto

FIHI FORGING INDUSTRY, S.L.

QUALITY CERTIFICATE / CERTIFICADO CALIDAD

EN10204 3.2

Nº Certificado: Certificate Nº:	040000373956_06	Fecha: Date:	10.05.2024	Nº Cert. Ensayo: Test Cert. Nº:	FIHI024415
Cliente: Customer:	ROSETTI MARINO S.P.A.	Nº Pedido: Order Nº:	1724000344 123A90A	Nº Albarán: Delivery Note Nº:	200147404/10
Nº Plano Cliente: Customer Drawing Nº:	123A90-DDL-ST-DD-90083			Cod. Artículo: Article Code:	2022215
Material: Material:	EN10025-3-S420NL	Trat. Térmico: Heat Treatment:	H5-0379 NORMALIZADO (+N) NORMALIZED (+N)	Estado Suministro: Delivery Condition:	MECANIZADO MACHINED

Cantidad Quantity	Descripción Artículos Articles description	Nº Colada Heat Nº	(1)Ref. Probeta(2) (1)Testing Piece Ref.(2)	Observaciones Observations
1	5888 - LAM-7000x6350X280-ST-DD-90083-R2 Ref. Brida (Flange) M-2022215 L/SN-1399936 Ref. Aro (Ring) M-5018780 L/SN-1397272	466767	(EP)374560-L (M)	

(1) TIPO PROBETA/*Type:* -EP: TOCHO/*End Piece* -R: ARANDELA/*Ring* -C: CUPÓN/*Coupon*

(2) SITUACIÓN/*Location:* -M: MATERIAL BASE/*Base Material* -W: SOLDADURA/*Welding* -H: ZAT/*HAZ*

COMPOSICIÓN QUÍMICA (%) / CHEMICAL COMPOSITION (%)

Ref. Probeta *Testing Piece Ref.*	(3)	C	Si	Mn	P	S	Nb	V	Al (4)	Ti	Cr	Ni	Mo	Cu	N	B	O	CEV (5)
466767	L	0,1470	0,3200	1,3300	0,0130	0,0090	0,0030	0,0720	0,0290	0,0048	0,1100	0,0700	0,0200	0,1200	0,0098	-	-	0,4220
(EP)374560-L (M)	P	0,1590	0,3200	1,2700	0,0120	0,0090	0,0020	0,0670	0,0210	0,0040	0,1100	0,0600	0,0160	0,1100	0,0081	-	-	0,4220

(3) L = ANÁLISIS DE COLADA/ *Laddle Analysis*
P = ANÁLISIS DE PRODUCTO/ *Product Analysis*

(4)Si la cantidad de elementos fijadores del N es suficiente (Nb:0.015-0.06% o V: 0.02-0.12%), la cantidad mínima de Al no aplica (material acorde a EN10025/EN10028/EN10273) /*The minimum value for aluminium does not apply if other N binding elements are present in sufficient quantity (Nb: 0.015-0.06% or V: 0.02-0.12%). (Materials according to EN10025/EN10028/EN10273)*

(5) CEV% (EN-10025-1) = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15

CARACTERÍSTICAS MECÁNICAS / TAMAÑO GRANO - MECHANICAL PROPERTIES / GRAIN SIZE

Ref. Probeta *Testing Piece Ref.*	Ensayo de Tracción *Tensile Test* (ISO 6892-1)				Estricción (%) *Reduction of Area (%)* (EN 10164)			Resistencia al Impacto KV2 *Impact Strength KV2* (ISO 148-1)				Dureza *Hardness*	Tamaño de Grano *Grain Size*
	(6)	Resist. Tracción *Tensile Strength* Rm MPa	Límite Elástico *Yield Strength* ReH MPa	Alargamiento *Elongation* Lo=5d A %	(6)	Valores Unitarios *Unitary values* %	Media *Average* %	(6)	Valores Unitarios *Unitary Values* J	Media *Average* J	Temp./ *Temp.* °C	HBW (ISO 6506-1)	(ASTM E-112)
(EP)374560-L (M)	L	505	366	35,6	Z	66-67-67	67	L	143-131-135	136	-40	-	-
								T	63-64-33	53,33	-40		

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 13/05/2024

(6) ORIENTACIÓN / *Orientation:* -T: TRANSVERSAL/*Transversal* -L: LONGITUDINAL/*Longitudinal* -Z: SENTIDO DEL ESPESOR/*Through thickness.*

DECLARACIÓN DE CONFORMIDAD *DECLARATION OF CONFORMITY:*

LOS PRODUCTOS INCLUIDOS EN EL PRESENTE DOCUMENTO SON CONFORMES CON LOS REQUISITOS DEL PEDIDO DE CLIENTE Y CON LOS DE LA(S) NORMA(S) DEL MATERIAL ARRIBA REFERIDO(S)

The product herein in this document has been made and tested in accordance with the requirements of the above mentioned order and standard.

VALIDADO POR
VALIDATED BY:

Departamento de Calidad:
Quality department:

Nora Lasa

D.Herrera
13/May/2024

BUREAU VERITAS

UKCA 2400 2400-CPR-20220126

CE 2451 2451-CPR-EN10025-2014.0001

FIHI Forging Industry S.L.

Environmental recommendations related to the product: At GRI Renewables we understand caring for the environment as a responsible management model in collaboration with our stakeholders, therefore, and with the aim of reducing the environmental impact of our activity and, therefore,of our production chain, we recommend to our clients and to all the parties involved in our life cycle, carry out a correct segregation and treatment of the waste generated, prioritizing its minimization, reuseand recycling, in accordance with the applicable legislation.

F_FIR_IL_01_02_R2
FECHA REV. DOC.: 10/11/2021

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

Declaration of performance

The manufacturer

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

declares herewith, that the construction product

Flanges produced by hot rolled products of structural steel according to EN 10025-1

with serial number

M-2022215 L-1399936

produced in factory

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

fulfills the requirements of the following EU-directive/s and harmonized specifications:

- **EN 10025-1**
- **EU 305**
- **EN 1090-1**
- **EN 1090-2 EXC 4**

The notified body/ies:

- **UKAS CPR: certified by TWI Certification Ltd /Notified body No. 2400 / Certificate No. 2400-CPR-20220126**
- **CE CPR: certified by DVS ZERT / Notified body No.2451 / Certificate No. 2451-CPR-EN10025-2014.0001.006**

And with customers specifications and drawings according to Purhase Order 1724000344

DRAWING	SPECIFICATION
123A90-DDL-ST-DD-90083-R2	123A90-DDL-ST-SP-90118 Document Class: 2 Rev.1, SPC-PRO-01Rev.2024-00, 123A90-DDL-ST-SP-90118_IFA REV.02 (05032024)

The performance of the products above is in conformity with the set of declared performance/s. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011/EU and Construction products (amendment etc.) (EU exit) Regulations 2020, UK statutory instrument 2020, under the sole responsibility of the manufacturer identified above.

Zestoa, 10.05.2024

FIHI FORGING INDUSTRY S.L

FIHI Forging Industry S.L.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

Business ID /C.I.F.
B75225946

www.grupoiraeta.com
Tel. +34 943 147 645
Fax. +34 943 897 029

Information is marked as Restricted and belongs to GRI.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE UKCA

2451 2400

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa)
SPAIN
08 - 22
2451-CPR-EN10025-2014.0001.006
2400-CPR-20220126

EN 10025-1
Hot rolled products of structural steels

Intended uses:	Building constructions or civil engineering
Tolerances on dimensions and shape:	Welded parts EN 10029 Class A
Elongation:	
Tensile strength	
Yield strength	Normalized Steel EN 10025-3 S420NL
Impact strength	
Weldability	
Durability:	NPD.
Regulated substance:	NPD.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 10 / 2024

Information is marked as Restricted and belongs to GRI.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE & UKCA Marking used for Inspection Certificates according to EN 10204

CE

2451

2451-CPR-EN10025-2014.0001.006

UKCA

2400

2400-CPR-20220126

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

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www.grupoiraeta.com
Tel. +34 943 147 645
Fax. +34 943 897 029

Information is marked as Restricted and belongs to GRI.

ACCIAIERIE BERTOLI SAFAU
ABSOLUTE STEEL QUALITY
ACCIAIERIE BERTOLI SAFAU SpA
Via Buttrio n.28 - Frazione Cargnacco - 33050 Pozzuolo del Friuli (UD)
Tel. +39 0432 613211 - Fax +39 0432 613209 - www.absacciai.it

CERTIFICATO DI COLLAUDO

Inspection Certificate 3.1/Certificat de reception 3.1/
Abnahmeprufzeugnis 3.1

N.	291974 / 1
Data	08.06.2021
COLATA N. Heat-Coulee-Schmelze	466767
Pag.	1 / 1

CLIENTE Customer-Client-Besteller	FIHI FORGING INDUSTRY S.L.	ORDINE Order-Commande-Bestellung	4500252451
PROFILO Shape-Section-Profili	CONTINUOUS CAST ROUND BARS , 600 MM -	STATO DI FORNITURA SupplyCondition-Etat de livraison	UNTREATED
ACCIAIO Steel-Acier-Stahl	S420	COMESSA/POS Sales Order/Pos:	1075944/10

CAPITOLATO ABS: Technical Specification: ABS

CAPITOLATO DI ANALISI: Material Specification: FORJAS IRAETA SP_FIR_DP_01_03_R0 03/09/2020

CAPITOLATO DI FORNITURA: Technical Delivery Requirements:

COMPOSIZIONE CHIMICA DI COLATA %

CAST ANALYSIS % - COMPOSITION CHIMIQUE DE COULEE % - SCHMELZE CHEMISCHE ANALYSE %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min		1,00							0,015			
Max	0,200	1,70	0,60	0,025	0,010	0,30	0,80	0,10	0,300	0,55	0,100	0,0500
Colata/Heat	0,147	1,33	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0048
	B (T)	V	Nb	As	Ca	Sb	Co	O/ppm	H/ppm	N/ppm	C EQ. LONG FORMULA	HI TUNDISH
Min												
Max	0,0008	0,200	0,050	0,100	0,1000	0,100	0,300	20,00	2,00	250	0,460	2,0
Colata/Heat	0,0001	0,072	0,003	0,004	0,0014	0,001	0,009	8,00	0,70	98	0,422	1,7

COMPOSIZIONE CHIMICA SOLIDO%

CHEMICAL ANALYSIS II % - COMPOSITION CHIMIQUE II % - CHEMISCHE ZUSAMMENSETZUNG II %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min												
Max												
Colata/Heat	0,145	1,34	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0046
	B (T)	V	Nb	As	Ca	Sb	Co	C Eq. Formula				
Min												
Max												
Colata/Heat	0,0001	0,069	0,003	0,004	0,0014	0,001	0,009	0,421				

CARATT. MECCANICHE

MECHANICAL PROPERTIES - CARACTERISTIQUES MECANIQUE - MECHANISCHE EIGSNSCHAFTER

TRATTAMENTO TERMICO HEAT TREATMENT

NOTE

ANTIMIX 100 %

TEST CERTIFICATE ISSUED ACCORDING TO: EN 10204/3.1

"NO WELDING REPAIRS"

COUNTRY OF ORIGIN : ITALY

VACUUM DEGASSED STEEL .

ELECTRIC ARC FURNACE STEEL .

FINE GRAIN STEEL .

FULLY KILLED .

- Material free from lead, mercury, cadmium and hexavalent chromium (dir. 2000/53/CE - dir. 2011/65/UE as amended)
- Material with radioactivity not exceeding 0,1Bq/g (d.lgs. 230/1995 as amended)

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2021

CONTROLLO QUALITA'

QUALITY CONTROL - CONTROLE DE QUALITE - QUALITATSSTEILE

Company with a management system certified by IGQ to
ISO 9001 and IATF 16949

Verif.:Omar Tonetti

FIHI Forging Industry S.L.

GRI Forges Iraeta FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

HORNO / FURNACE:	HO-05	Nº HORNADA / TREATMENT Nº:	H5-0379	MATERIAL / MATERIAL:	Aro
FECHA INICIO / STARTING DATE:	01/05/2024 23:13:00	FECHA FINAL / FINISHING DATE:	02/05/2024 17:53:09	PESO / WEIGHT [Kg]:	79175
PERMANENCIA REAL / REAL HOLDING TIME [min]:	429	PERMANENCIA PREVISTA / SCHEDULED HOLDING TIME [min]:	420	MAYOR ESPESOR / MAX. THICKNESS [mm]:	305

DESCRIPCIÓN MATERIAL MATERIAL DESCRIPTION	BATCH	ESPESOR (mm) / THICKNESS (mm)
M5018400 C/482504 (UND 2)	B-373312	240
M5018400 C/482505 (UND 3)	B-373311	240
M5018780 C/466767 (UND 1)(PROB 1)	B-374560	305
320x105x1400 C/466767(UND 2) (PROB 1)	L-1392810	105
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0

FIHI FORGING INDUSTRY, S.L. certifica que el material detallado en el presente documento, ha sido sometido al tratamiento térmico según la especificación que se detalla en este documento

FIHI FORGING INDUSTRY, S.L. certifies that the detailed material of this document has been treated according the especification below referenced.

ESPECIFICACIÓN DE TRATAMIENTO TÉRMICO / SPECIFICATION FOR HEAT TREATMENT

Normalizado según / Normalized according IN_FIR_PT_04/10/24

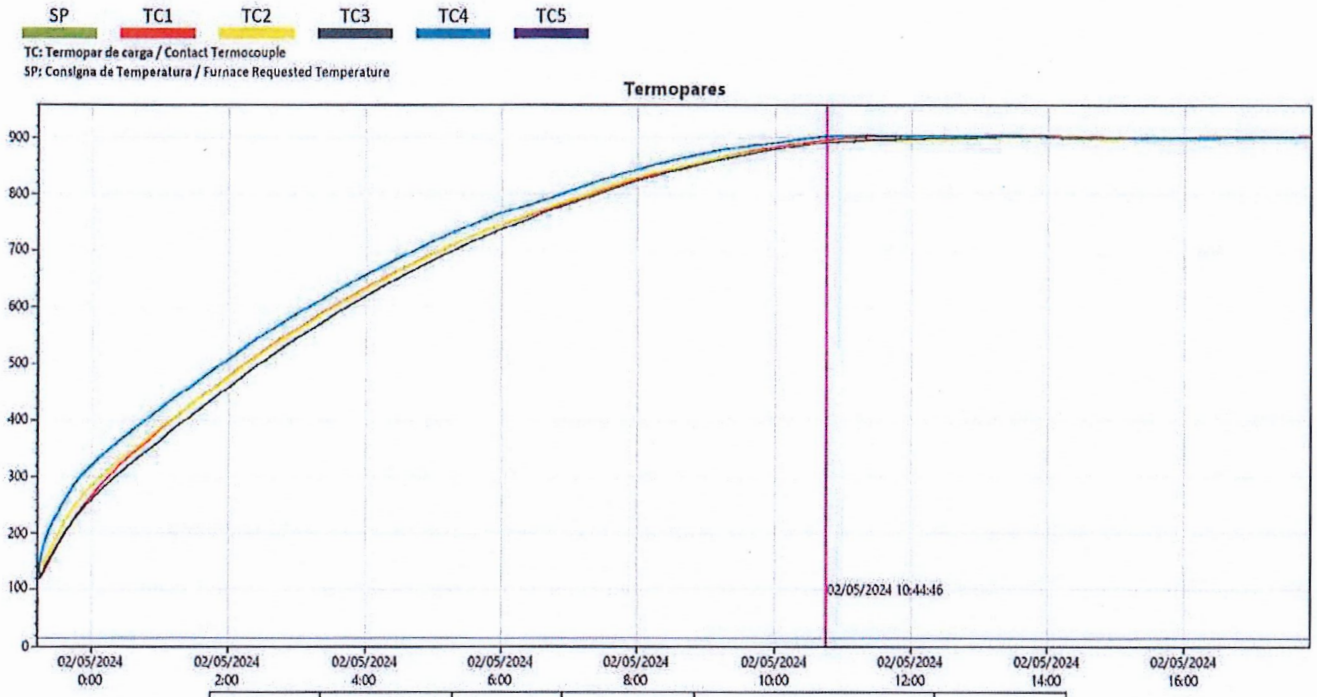
FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13./05./2024

FIHI Forging Industry S.

FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

GRÁFICO DE TRATAMIENTO / TREATMENT CHART



REF.TC1	94321-12	REF.TC2	94321-24	REF.TC3	94321-1
REF.TC4	94321-11	REF.TC5	NO APLICA	REF. LASER OPTICO	

Conformidad de Tratamiento Termico

Conformity of Heat Treatment

Nombre de responsable / Responsible: Jesús Arruti

OBSERVACIONES	

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI Forging Industry S.L.

GRI Forges Iraeta FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

						M5018400	(5)						
						M5018780	(1)*						
						M5018778	(2)**						
						1392810**	C/466767						
						1395442	C/482505						
					TC4>>>	1395443	C/482505						
					TC3>>>	1395445	C/482504						
						1395444	C/482505						
					TC2>>>	1395446	C/482504						
					TC1>>>	1397272*	C/466767						

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI Forging Industry S.L.

Certificado de Inspección 3.1

LINCOLN ELECTRIC
THE WELDING EXPERTS

Línea productos FCAW
Producto OUTERSHIELD MC420NP-H
Tamaño (mm) 1,6
Item No. 943317
Lote P1FC226195
Clasificación AWS A5.28 E70C-G-H4
ISO 17632-A T 38 Z Z M M21 2 H5

Pedido Cliente 4500326667
Nuestra Orden 818890832
Cantidad 1800.0 KG
Cliente FIHI FORGING INDUSTRY S.L.

BARRIO CHIRIBOGA S/N
CESTONA 20740
España

Análisis Químico(%) According to EN10204 3.1

C	Si	Mn	P	S	Cr	Ni	Mo	Nb	Cu	V	Ti	Al
0.045	0.53	0.86	0.010	0.013	0.04	2.75	0.01	0.11	0.03	<0.01	0.010	<0.001

Sn	Pb	Zr	N
0.010	<0.001	<0.001	0.010

Propiedades mecánicas, Metal Depositado According to EN10204 3.1

Tensile testing

Cond.	Temp. °C	ReL MPa	Rm MPa	A5 %
PWHT 4.0h@900°C	21	381	543	30

Impact testing

Cond.	Temp °C	Impac J
PWHT 4.0h@900°C	-50	150

Diffusible hydrogen According to EN10204 3.1

HDM as Manufactured
2.7 ml/100g

Observaciones

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2023

14/06/2023

El producto arriba mencionado ha sido fabricado, controlado y suministrado en cumplimiento con el Sistema de aseguramiento de Calidad certificado según ISO 9001.

Compañia
Lincoln Electric Iberia S.L.
CTRA. LAUREA MIRO 396-398
08980 SAINT FELIU DE LLOBREGAT
Spain

Impreso por
R.Polaczek
POSITION: Quality & R&D Manager

Impreso por
Por David Jodra
Cargo Operation Manager
Consultant
Fecha 13/JUN/2023

Cert.número
02077715
ZEU_LOWALLOY, 1

METRODE

GRI Flonges Iraeta

CERTIFICADO DE ENSAYOS

FIHI FORGING INDUSTRY, S.L.
Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

INFORME NUMERO/ REPORT NUMBER:	FIHI024415

FECHA DE EMISIÓN / DATE OF ISSUE:		09/05/2024
CLIENTE	Nombre	FIHI Forging Industry, S.L.
	Dirección	Bº Txiriboga, s/n 20740 Zestoa (Gipuzkoa) SPAIN Tel: +34 943 147 645
PEDIDO / ORDER		P24415
FECHA DE RECEPCIÓN / DATE OF RECEIPT		07/05/2024
REFERENCIA / REFERENCE		B-374560
MATERIAL ENSAYADO / TESTED MATERIAL:		M5018780 C/466767

BUREAU VERITAS
09 MAY 2024

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

F_FIR_LB_01_19_01_R2
Fecha rev. Formato: 06/06/2023

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flonges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024415

CARACTERÍSITCAS MECÁNICAS / MECHANICAL PROPERTIES

Fecha / Date	Referencia /Reference	Sentido-ubicación/ Direction-location	Ensayo de tracción / Tensile test				
			Temperatura/ Temperature (ºC)	Diámetro/ Diameter (mm)	R_{eH} / U.Y.S. (MPa)	Rm / T.S. (MPa)	A/ Elongation (%)
09/05/2024	B-374560	Longitudinal	21	10.01	366	505	35.6

Ensayo realizado según / Test carried out according to UNE-EN 6892-1:2020 Met. B y/and IN_FIR_LB_01_07

Fecha/ Date	Referencia/ Reference	Sentido-ubicación/ Direction-location	Ensayo de flexión por choque / Charpy Impact test			
			Energía absorbida / Absorbed Energy , KV_2 (J)			
			Temperatura/ Temperature (ºC)	Probeta / Specimen 1	Probeta / Specimen 2	Probeta / Specimen 3
09/05/2024	B-374560	Longitudinal	-40	143	131	135
		Transversal	-40	63	64	33

Ensayo realizado según / Test carried out according to UNE-EN ISO 148-1:2017 y/ and IN_FIR_LB_01_06

Fecha / Date	Referencia / Reference	Ensayo de tracción en sentido del espesor / through thickness tensile test (Z)			
		Temperatura / Temperature (ºC)	Probeta / Specimen	Diámetro / Diameter (mm)	Estricción / Area reduction (%)
09/05/2024	B-374560	22	1	9.98	66
		22	2	10.05	67
		22	3	10.05	67

Ensayo realizado según / Test carried out according to UNE-EN ISO 6892-1:2020 Met.B, UNE-EN 10164:2019 y/ and IN_FIR_LB_01_07

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

BUREAU VERITAS

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.
Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024415

ANALISIS QUÍMICO / CHEMICAL ANALYSIS

Fecha / Date	Referencia / Reference	Composición / Composition (%)						
		C	Si	Mn	P	S	Cr	Mo
09/05/2024	B-374560	0.159	0.32	1.27	0.012	0.009	0.11	0.016
	C/466767*	0.147	0.32	1.33	0.013	0.009	0.11	0.02
Fecha / Date	Referencia / Reference	Ni	Cu	V	Al	Nb	Ti	N
09/05/2024	B-374560	0.06	0.11	0.067	0.021	0.002	0.004	0.0081
	C/466767*	0.07	0.12	0.072	0.029	0.003	0.0048	0.0098

Ensayo realizado según / Test carried out according to IN_FIR_LB_01_01 y/and IN_FIR_LB_01_04

Fecha / Date	Referencia / Reference	Parámetros calculados / Calculated parámeters	
		C_{EQ} (1) (C_{EQ}= C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15) (%)	C_{ET} (2) (C_{ET}= C + (Mn+Mo)/10 + (Cr+Cu)/20 + Ni/40) (%)
09/05/2024	B-374560	0.422	N/A
	C/466767*	0.422	

(1) Parámetro calculado según / Calculated parameter according to EN-10025-1:2006

(2) Parámetro calculado según / Calculated parameter according to EN-1011-2:2001

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024415

OBSERVACIONES / COMMENTS

*Datos proporcionados por el proveedor / Data provided by supplier

FIRMA / SIGNATURE

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

[X] Witness [ ] Review
MAY 2024
BUREAU VERITAS

Forging Industry S.L.

Cristina Iparraguirre

Responsable de laboratorio /

Laboratory responsible

Los resultados de este informe sólo afectan a las muestras sometidas a ensayo.
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The results of this report refer only to the tested samples
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GRI Flanges Iraeta

FIHI FORGING INDUSTRY S.L

INFORME DE INSPECCIÓN POR ULTRASONIDOS Y VISUAL
ULTRASONIC AND VISUAL INSPECTION REPORT

Nº de Serie /Serial Nº:	OF::	5888	M:	2022215	L:	1399936	Cliente / Customer:	Rosetti Marino
							Plano Cliente / Customer Drawing:	ST-DD-90083-R2
Descripción / Description:	FLANGE							

Nombre del técnico / Name of the technician:	OIER ECEIZA	Nivel / Level:	2
Organización de inspección / Examination organization:	FIHI FORGING INDUSTRY S.L.	Nº Certificado / Certificate No.:	E-A-007398-UT-MS-1

Identificación del equipo de inspección / Identification of used equipment:				OLYMPUS - EPOCH			
Identificación de bloque de referencia empleado / Identification of used reference block (s)							
V1-No.:	12545	V2-No.:	50434-20398	TIF-Block No.:	FI-UT-BI	Other:	
Verificación de palpadores / Probe check		☒ OK	☐ NO OK	Acoplante / Couplant:		ACEITE / OIL	

Información palpadores utilizados (tipo, nº identificación, frecuencia y ángulo real de salida del palpador / Information of used probes (type, ID number, frecuency and the probes angle

Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle	Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle
Probe "A"	B4S	57746	4 Mhz / 0 °	Probe "B"	DL4R	1481248	4 Mhz /0 °
Probe "C"	SWB45-2	58414-53756	2 Mhz /45°	Probe "D"	SWB70 -2	58416-54064	2 Mhz / 70 °
Probe "E"				Probe "F"			

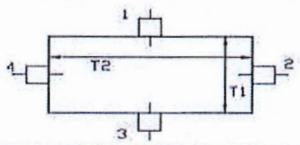
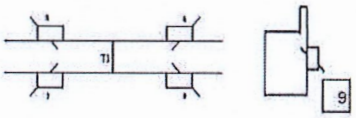
Normas a aplicar / Standards to be apply

Criterio de aceptación material base / Base material aceptance criteria	Criterio de aceptación Soldadura / Welds aceptance criteria	Criterio de aceptación inspección visual / Visual inspections acceptance criteria
EN 10308 clase 3	ISO 17640-B	ISO 17637
	ISO 11666 clase 2	EN 5817-B

Ganancia empleada para el nivel de referencia y valores usados para la corrección por perdidas por transferencia / Gain setting for reference level and values used for transfer corrections

	A:	B:	C:	D:	E:	F:
ID Palpador / Probe ID						
Método de ajuste / Method settings (*)	3	3	1	1		
Campo aplicación / Setting range	300 mm	300 mm	300 mm	300 mm	mm	mm
Nivel de referencia / Setting reference	(dia) 2 mm	(dia) 2 mm	(dia) 3 mm	(dia) 3 mm	(dia) mm	(dia) mm
Ajuste de la base / Basic set.-ref curve	dB	dB	36 dB	39 dB	dB	dB
Corrección perdida transferencia / Transfer correction	dB	dB	2 dB	2 dB	dB	dB
Ganancia adicional para la inspección / Extra gain for scanning	dB	dB	14 dB	14 dB	dB	dB
TOTAL	dB	dB	52 dB	55 dB	dB	dB

(*) Método de ajuste de la sensibilidad: 1- taladros laterales 2- Taladros de fondo plano 3- Curvas distancia amplitud (DAC)
(*) Method for setting of the sensitivity: 1 Side drilled holes 2- Flat bottom holes 3- Distance gain size (DGS)

Posición para la inspección de defectos longitudinales y laminación / Scanning position for longitudinal defects and lamination	Posición para la inspección de soldaduras / Scanning position for weldings inspection
	

Extension del examen / Extent of examination

Tipo de insp. / Type of insp. (2)	Espesor 1 / Thickness 1	Espesor 2 / Thickness 2	Palpador – Posición palpador / Probe- probe position	Área de inspección / Inspection area
2	120-280 mm	mm	C5/C6 - C7/C8 - D5/D6 - D7/D8 - C9 / D9	100%
3	120-280 mm	325 mm	A1/A2 - B1/B2	100%
	mm	mm		%
	mm	mm		%

2) Tipo de inspección: 1: Insp. de aros laminados de sección rectangular 2: Insp. de las soldaduras 3: Insp. de aro fabricado en llanta de sección rectangular
2) Type of inspection: 1: Insp. of the seamless rolled ring with rectangular cross section 2: Insp. of the weld in the steel bar 3: Insp. of the ring made out of bars with rectangular cross section

Resultado de la inspección y marcas / Result of the examination and remarks:
☒ ACEPTABLE / ACCEPTABLE
☐ NO ACEPTABLE / NOT ACCEPTABLE

Firma Inspector / Technician signature: FIHI Forging Industry S.L.

Fecha / Date: 8/05/2024

Responsable de NDT y supervisor / NDT responsible and supervisor:
Urtzi Landa : E - A - 004708 - UT - 2 - MS - 2

Firma supervisor / Supervisor Signature: FIHI Forging Industry S.L.

F_FIR_IP_01_01_R0
FECHA REV. DOC.: 06/03/2023

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 10/05/2024

GRI Flanges Iraeta
FIHI FORGING INDUSTRY SL

INFORME DE INSPECCIÓN POR MT y VT
INSPECTION REPORT OF MT AND VT

Nº de Serie / Serial Nº:	OF: 5888	M: 2022215	L: 1399936	Cliente / Customer: Rosetti Marino
				Nº Plano Cliente / Customer Drawing Nº: ST-DD-90083-R2
Descripción / Description:	FLANGE			

INFORME DE INSPECCIÓN POR PARTÍCULAS MAGNÉTICAS
MAGNETIC TESTING INSPECTION REPORT

Normativa / Standard: ISO 23278 2x / ISO 17638		Preparación superficial / Surface finish: Mecanizado/ Machined	
Partículas Magnéticas / Magnetic particles: NEGRAS / BLACK	Fabricante / Manufacturer: CGM	Referencia / Reference: LK31 - 355	Color / Colour: NEGRO / BLACK
Aparato utilizado / Type of machine: YUGO ELECTROMAGNETICO / YOKE ELECTROMAGNETIC	Fabricante / Manufacturer: YUKE MAGIFLUS	Modelo / Model: TWIST 230	Nº Serie / Serial number: A : 903823 VOLT : 280428
Método de limpieza / Method of cleaning: DESENGRASADO / DEGREASED	Laca de contraste / Strip film contrast: SI / YES	Secuencia magnetización / Sequence of magnetization: CONTINUO / CONTINUE	Temperatura de la pieza / Piece temperatura: 10 - 50 °C
Iluminación / Ilumination: NATURAL / NATURAL	Duración de la magnetización / Duration of Magnetization: 5 - 10 sg	Corriente de magnetización / Flow of magnetization: ALTERNA / ALTERNATE	Intensidad (kv) / Strenght: 3,8 K/A
Luxómetro (lux) / Luxometer (lux): > 500 LUX	Relación L/D / Relation L/D: N.A	Amperio –Vuelta / Ampere-lap: N.A	Distancia Polos (mm) / Distance Poles: 150 - 250
			Fuerza Izado (Kg) / Lifting Power: 4,5
Material de contacto / Type of contact: ACERO / STEEL	Desmagnetización / Demagnetization: NO PRECISA / NOT NECESSARY	Inspección al 100% de la zona de la soldadura + ZAT / Inspection of the 100% of the Weld area + HAZ	

Resultado / Results: ☒ ACEPTABLE / ACCEPTABLE ☐ NO ACEPTABLE / NOT ACCEPTABLE	Observaciones / Observations:		
Operador / Operator: OIER ECEIZA E-A-007398-MT-2-S-1	Nivel / Level: 2	Firma / Signature: FIHI Forging Industry S.L.	
Supervisor / Supervisor: URTZI LANDA : E - A - 004708 - MT - 2 - S - 2	Nivel / Level: 2	Firma / Signature: FIHI Forging Industry S.L.	Fecha / Date: 10/05/2024

INFORME DE INSPECCIÓN VISUAL
VISUAL TESTING INSPECTION REPORT

Normativa / Standard: ISO 5817-B / ISO 17637		Periodo de inspección / Time of examination: DESPUES DE MECANIZAR / AFTER MACHINING
Instrumentación / Aids: REGLA / RULER (mm)		
Extensión de la inspección / Extent of examination: SOLDADURA + ZAT / WELD + HAZ		Condiciones superficiales / Surface conditions: MECANIZADO / MACHINED

Resultado / Results: ☒ ACEPTABLE / ACCEPTABLE ☐ NO ACEPTABLE / NOT ACCEPTABLE	Observaciones / Observations:		
Operador / Operator: OIER ECEIZA E-A-007398-VT-2-S-1	Nivel / Level: 2	Firma / Signature: FIHI Forging Industry S.L.	
Supervisor / Supervisor: URTZI LANDA : E - A - 004708 - VT - 2 - MS - 2	Nivel / Level: 2	Firma / Signature: FIHI Forging Industry S.L.	Fecha / Date: 10/05/2024

F_FIR_IP_01_04_01_R0
FECHA REV. DOC.: 07/03/2023

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☒
R ☒
DATE: 10/05/2024

FIHI FORGING INDUSTRY, S.L.

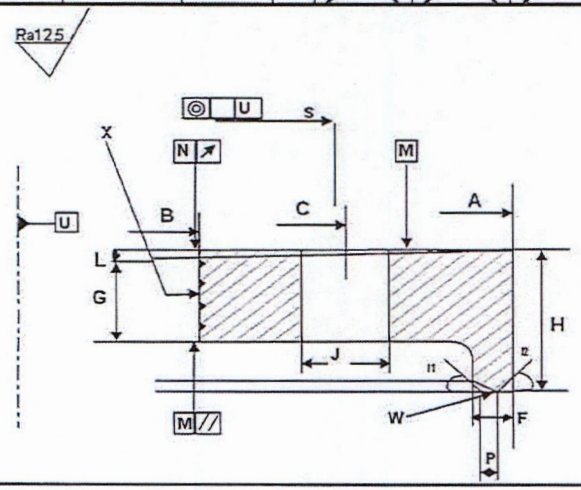
Registro de Control Dimensional Brida en "L"
Register of Dimentional Control Flange in "L"

F_FIR_PT_05_02_R0 14/11/2019

Nº de albarán/ *Delivery note:* 200147404/10 | **Nº Colada/** *Heat Nº:* 466767

Nº de plano/*Item nº:* 123A90-DDL-ST-DD-90083 | **Cód.Material/***Material code:* 2022215 | **Nº de piezas/***Qty.:* 1 UN

Nº Operario / Worker Nº	Nº Brida / Flange Nº	FECHA / Date		Ø Exter. / Outside Ø A	Ø Inter. / Inside Ø B	Ø Entrecen. / Hole Circle Ø C	Esp.Cuello / Neck width F	Altura Ala / Thickness ins. G	Alt. Pieza / Height H	Angulo Chaflan(°) / Chamfer angle(°) I1	I2	Ancho talón / Bead width P	Ø Agujeros / Hole diameter J	Nº Agujeros / Holes Nº K1	Dis.Pared ext. / Outside wall distance	Conicidad / Tilt L	Paralelism / Parallelism M	Planitud / Flatness N	Rugosidad / Roughness Ra	Muesca / Marcs W	Marca alineam. / Align. marc X
		COTAS mm		7000,00	6350,00	6681,00	75,00	120,00	280,00	15,00	15,00	5,00	70,00	156	124,50	N.A.	0,00	0,00	N.A.	N.A.	
		TOLERANCIAS / Tolerances		+ 2,00	+ 2,00	+ 2,00	+ 1,00	+ 0,00	+ 2,00	+ 1,00	+ 1,00	+ 1,00	+ 0,50	+ 0	+ 2,25	+ N.A.	+ 0,50	+ 2,00	N.A.	N.A.	0
				- 2,00	- 2,00	- 2,00	- 0,00	- 5,00	- 1,00	- 1,00	- 1,00	- 1,00	- 0,50	- 0	- 2,25	- N.A.	- 0,00	- 0,00	N.A.	N.A.	0
			Máx.	7002,00	6352,00	6683,00	76,00	120,00	282,00	16,00	16,00	6,00	70,50	156	126,75	N.A.	0,50	2,00	OK/ NO OK	OK/ NO OK/ *NA	
			Mín.	6998,00	6348,00	6679,00	75,00	115,00	279,00	14,00	14,00	4,00	69,50	156	122,25	N.A.	0,00	0,00			
126	1399936	10.05.2024	0°	7001,58	6349,70	6681,10	75,73	119,19	281,54	15,00	15,00	4,73	70,05	156	125,21		0,50	0,22			OK
72			90°	7001,83	6349,95	6681,28	75,50	119,40	281,70			4,63	70,01		125,02						
521			180°				75,90	118,90	281,20			4,78	69,93		125,31						
			270°				75,84	119,29	281,62			4,68	70,05		125,03						
			0°																		
			90°																		
			180°																		
			270°																		



Observaciones/ *Remarks:*

FRANCESCO PARISE
EUGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 13.05.2024

Aceptado por el Departamento de Calidad

Nombre/ *Name:*
Nora Lasa

Firma y Sello/ *Signature and stamp:*
FIHI Forging Industry S.L.

Fecha/ *Date:*
10.05.2024

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

QUALITY CERTIFICATE / CERTIFICADO CALIDAD

EN10204 3.2

Nº Certificado: Certificate Nº:	040000374469_06	Fecha: Date:	13.05.2024	Nº Cert. Ensayo: Test Cert. Nº:	FIHI024426
Cliente: Customer:	ROSETTI MARINO S.P.A.	Nº Pedido: Order Nº:	1724000344 123A90A	Nº Albarán: Delivery Note Nº:	200147415/10
Nº Plano Cliente: Customer Drawing Nº:	TEST COUPON			Cod. Artículo: Article Code:	2022233
Material: Material:	EN10025-3-S420NL	Trat. Térmico: Heat Treatment:	H5-0379 NORMALIZADO (+N) NORMALIZED (+N)	Estado Suministro: Delivery Condition:	MECANIZADO MACHINED

Cantidad Quantity	Descripción Artículos Articles description	Nº Colada Heat Nº	(1)Ref. Probeta(2) (1)Testing Piece Ref.(2)	Observaciones Observations
1	TEST COUPON -320x105x1400 (S420NL)-NL0S Ref. Test Cupón (Test Coupon) M-2022233 L/SN-1400647	466767	(EP)1392810-L (M) (T1)1392810 (M) (T2)1392810 (M)	

(1) TIPO PROBETA/*Type:* -EP: TOCHO/*End Piece* -R: ARANDELA/*Ring* -C: CUPÓN/*Coupon*

(2) SITUACIÓN/*Location:* -M: MATERIAL BASE/*Base Material* -W: SOLDADURA/*Welding* -H: ZAT/*HAZ*

COMPOSICIÓN QUÍMICA (%) / CHEMICAL COMPOSITION (%)

Ref. Probeta *Testing Piece Ref.*	(3)	C	Si	Mn	P	S	Nb	V	Al (4)	Ti	Cr	Ni	Mo	Cu	N	B	O	CEV (5)
466767	L	0,1470	0,3200	1,3300	0,0130	0,0090	0,0030	0,0720	0,0290	0,0048	0,1100	0,0700	0,0200	0,1200	0,0098	-	-	0,4220
(EP)1392810-L (M)	P	0,1610	0,3100	1,2800	0,0120	0,0100	0,0020	0,0680	0,0210	0,0040	0,1100	0,0600	0,0160	0,1100	0,0058	-	-	0,4260

(3) L = ANÁLISIS DE COLADA/ *Laddle Analysis*
P = ANÁLISIS DE PRODUCTO/ *Product Analysis*

(4)Si la cantidad de elementos fijadores del N es suficiente (Nb:0.015-0.06% o V: 0.02-0.12%), la cantidad mínima de Al no aplica (material acorde a EN10025/EN10028/EN10273) /The minimum value for aluminium does not apply if other N binding elements are present in sufficient quantity (Nb: 0.015-0.06% or V: 0.02-0.12%). (Materials according to EN10025/EN10028/EN10273)

(5) CEV% (EN-10025-1) = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15

CARACTERÍSTICAS MECÁNICAS / TAMAÑO GRANO - MECHANICAL PROPERTIES / GRAIN SIZE

Ref. Probeta *Testing Piece Ref.*	Ensayo de Tracción *Tensile Test* (ISO 6892-1)				Estricción (%) *Reduction of Area (%)* (EN 10164)			Resistencia al Impacto KV2 *Impact Strength KV2* (ISO 148-1)				Dureza *Hardness*	Tamaño de Grano *Grain Size*
	(6)	Resist. Tracción *Tensile Strength* Rm MPa	Límite Elástico *Yield Strength* ReH MPa	Alargamiento *Elongation* Lo=5d A %	(6)	Valores Unitarios *Unitary values* %	Media *Average* %	(6)	Valores Unitarios *Unitary Values* J	Media *Average* J	Temp./ *Temp.* °C	HBW (ISO 6506-1)	(ASTM E-112)
(EP)376008-L (M)	L	519	357	32,2	Z	66-63-63	64	L	167-139-144	150	-40	-	-
(T1)1392810 (M)	-	-	-	-	-	-	-	T1	53-64-71	63	-40	-	-
(T2)1392810 (M)	-	-	-	-	-	-	-	T2	54-49-47	50	-40	-	-

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 13 / 05 / 2024

(6) ORIENTACIÓN / *Orientation:* -T: TRANSVERSAL/*Transversal* -L: LONGITUDINAL/*Longitudinal* -Z: SENTIDO DEL ESPESOR/*Through thickness.*

DECLARACIÓN DE CONFORMIDAD *DECLARATION OF CONFORMITY:*

LOS PRODUCTOS INCLUIDOS EN EL PRESENTE DOCUMENTO SON CONFORMES CON LOS REQUISITOS DEL PEDIDO DE CLIENTE Y CON LOS DE LA(S) NORMA(S) DEL MATERIAL ARRIBA REFERIDO(S)

The product herein in this document has been made and tested in accordance with the requirements of the above mentioned order and standard.

VALIDADO POR
VALIDATED BY:

Departamento de Calidad:
Quality department:

Nora Lasa

D.Herrera-Dávila
13/May/2024

BUREAU VERITAS 2400 2400-CPR-20220126

2451 2451-CPR-EN10025-2014.0001

FIHI Forging Industry S.L.

Environmental recommendations related to the product: At GRI Renewables we understand caring for the environment as a responsible management model in collaboration with our stakeholders, therefore, and with the aim of reducing the environmental impact of our activity and, therefore,of our production chain, we recommend to our clients and to all the parties involved in our life cycle, carry out a correct segregation and treatment of the waste generated, prioritizing its minimization, reuseand recycling, in accordance with the applicable legislation.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

Declaration of performance

The manufacturer

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

declares herewith, that the construction product

Test coupons produced by hot rolled products of structural steel according to EN 10025-1 with serial number

M-2022233 L-1400647

produced in factory

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

fulfills the requirements of the following EU-directive/s and harmonized specifications:

- **EN 10025-1**
- **EU 305**
- **EN 1090-1**
- **EN 1090-2 EXC 4**

The notified body/ies:

- **UKAS CPR: certified by TWI Certification Ltd /Notified body No. 2400 / Certificate No. 2400-CPR-20220126**
- **CE CPR: certified by DVS ZERT / Notified body No.2451 / Certificate No. 2451-CPR-EN10025-2014.0001.006**

And with customers specifications and drawings according to Purhase Order 1724000344

DRAWING	SPECIFICATION
TEST CUPÓN	123A90-DDL-ST-SP-90118 Document Class: 2 Rev.1, SPC-PRO-01Rev.2024-00, 123A90-DDL-ST-SP-90118_IFA REV.02 (05032024)

The performance of the products above is in conformity with the set of declared performance/s. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011/EU and Construction products (amendment etc.) (EU exit) Regulations 2020, UK statutory instrument 2020, under the sole responsibility of the manufacturer identified above.

Zestoa, 13.05.2024
FIHI FORGING INDUSTRY S.L

FIHI Forging Industry S.L.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13./05./2024

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

Business ID /C.I.F.
B75225946

www.grupoiraeta.com
Tel. +34 943 147 645
Fax. +34 943 897 029

Information is marked as Restricted and belongs to GRI.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE UKCA

2451 2400

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa)
SPAIN
08 - 22
2451-CPR-EN10025-2014.0001.006
2400-CPR-20220126

EN 10025-1
Hot rolled products of structural steels

Intended uses:	Building constructions or civil engineering
Tolerances on dimensions and shape:	Welded parts EN 10029 Class A
Elongation:	
Tensile strength	
Yield strength	Normalized Steel EN 10025-3 S420NL
Impact strength	
Weldability	
Durability:	NPD.
Regulated substance:	NPD.

FIHI FORGING INDUSTRY S.L
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FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

Information is marked as Restricted and belongs to GRI.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE & UKCA Marking used for Inspection Certificates according to EN 10204

2451

2451-CPR-EN10025-2014.0001.006

2400

2400-CPR-20220126

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
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FRANCESCO PARISE
ENGINEER Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

Information is marked as Restricted and belongs to GRI.

ACCIAIERIE BERTOLI SAFAU
ABSOLUTE STEEL QUALITY
ACCIAIERIE BERTOLI SAFAU SpA
Via Buttrio n.28 - Frazione Cargnacco - 33050 Pozzuolo del Friuli (UD)
Tel. +39 0432 613211 - Fax +39 0432 613209 - www.absacciai.it

CERTIFICATO DI COLLAUDO

Inspection Certificate 3.1/Certificat de reception 3.1/
Abnahmeprufzeugnis 3.1

N.	291974 / 1
Data	08.06.2021
COLATA N. Heat-Coulée-Schmelze	466767
Pag.	1 / 1

CLIENTE Customer-Client-Besteller	FIHI FORGING INDUSTRY S.L.	ORDINE Order-Commande-Bestellung	4500252451
PROFILO Shape-Section-Profili	CONTINUOUS CAST ROUND BARS , 600 MM -	STATO DI FORNITURA Supply Condition-Etat de livraison	UNTREATED
ACCIAIO Steel-Acier-Stahl	S420	COMESSA/POS Sales Order/Pos.	1075944/10

CAPITOLATO ABS: Technical Specification: ABS

CAPITOLATO DI ANALISI: Material Specification: FORJAS IRAETA SP_FIR_DP_01_03_R0 03/09/2020

CAPITOLATO DI FORNITURA: Technical Delivery Requirements:

COMPOSIZIONE CHIMICA DI COLATA %

CAST ANALYSIS % - COMPOSITION CHIMIQUE DE COULEE % - SCHMELZE CHEMISCHE ANALYSE %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min		1,00							0,015			
Max	0,200	1,70	0,60	0,025	0,010	0,30	0,80	0,10	0,300	0,55	0,100	0,0500
Colata/Heat	0,147	1,33	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0048
	B (T)	V	Nb	As	Ca	Sb	Co	O/ppm	H/ppm	N/ppm	C EQ. LONG FORMULA	HI TUNDISH
Min												
Max	0,0008	0,200	0,050	0,100	0,1000	0,100	0,300	20,00	2,00	250	0,460	2,0
Colata/Heat	0,0001	0,072	0,003	0,004	0,0014	0,001	0,009	8,00	0,70	98	0,422	1,7

COMPOSIZIONE CHIMICA SOLIDO%

CHEMICAL ANALYSIS II % - COMPOSITION CHIMIQUE II % - CHEMISCHE ZUSAMMENSETZUNG II %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min												
Max												
Colata/Heat	0,145	1,34	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0046
	B (T)	V	Nb	As	Ca	Sb	Co	C Eq. Formula				
Min												
Max												
Colata/Heat	0,0001	0,069	0,003	0,004	0,0014	0,001	0,009	0,421				

CARATT. MECCANICHE

MECHANICAL PROPERTIES - CARACTERISTIQUES MECANIQUE - MECHANISCHE EIGSNSCHAFTER

TRATTAMENTO TERMICO HEAT TREATMENT

NOTE

ANTIMIX 100 %

TEST CERTIFICATE ISSUED ACCORDING TO: EN 10204/3.1

"NO WELDING REPAIRS"

COUNTRY OF ORIGIN : ITALY

VACUUM DEGASSED STEEL .

ELECTRIC ARC FURNACE STEEL .

FINE GRAIN STEEL .

FULLY KILLED .

- Material free from lead, mercury, cadmium and hexavalent chromium (dir. 2000/53/CE - dir. 2011/65/UE as amended)
- Material with radioactivity not exceeding 0,1Bq/g (d.lgs. 230/1995 as amended)

CONTROLLO QUALITA'

QUALITY CONTROL - CONTROLE DE QUALITE - QUALITATSSTEILE

Company with a management system certified by IGQ to
ISO 9001 and IATF 16949

Verif.:Omar Tonetti

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO

W ☐
R ☑
DATE: 13 / 05 / 2021

FIHI Forging Industry S.L.

GRI Forges Vasco FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

HORNO / FURNACE:	HO-05	Nº HORNADA / TREATMENT Nº:	H5-0379	MATERIAL / MATERIAL:	Aro
FECHA INICIO / STARTING DATE:	01/05/2024 23:13:00	FECHA FINAL / FINISHING DATE:	02/05/2024 17:53:09	PESO / WEIGHT [Kg]:	79175
PERMANENCIA REAL / REAL HOLDING TIME [min]:	429	PERMANENCIA PREVISTA / SCHEDULED HOLDING TIME [min]:	420	MAYOR ESPESOR / MAX. THICKNESS [mm]:	305

DESCRIPCIÓN MATERIAL MATERIAL DESCRIPTION	BATCH	ESPESOR (mm) / THICKNESS (mm)
M5018400 C/482504 (UND 2)	B-373312	240
M5018400 C/482505 (UND 3)	B-373311	240
M5018780 C/466767 (UND 1)(PROB 1)	B-374560	305
320x105x1400 C/466767(UND 2) (PROB 1)	L-1392810	105
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0

FIHI FORGING INDUSTRY, S.L. certifica que el material detallado en el presente documento, ha sido sometido al tratamiento térmico según la especificación que se detalla en este documento

FIHI FORGING INDUSTRY, S.L. certifies that the detailed material of this document has been treated according the especification below referenced.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

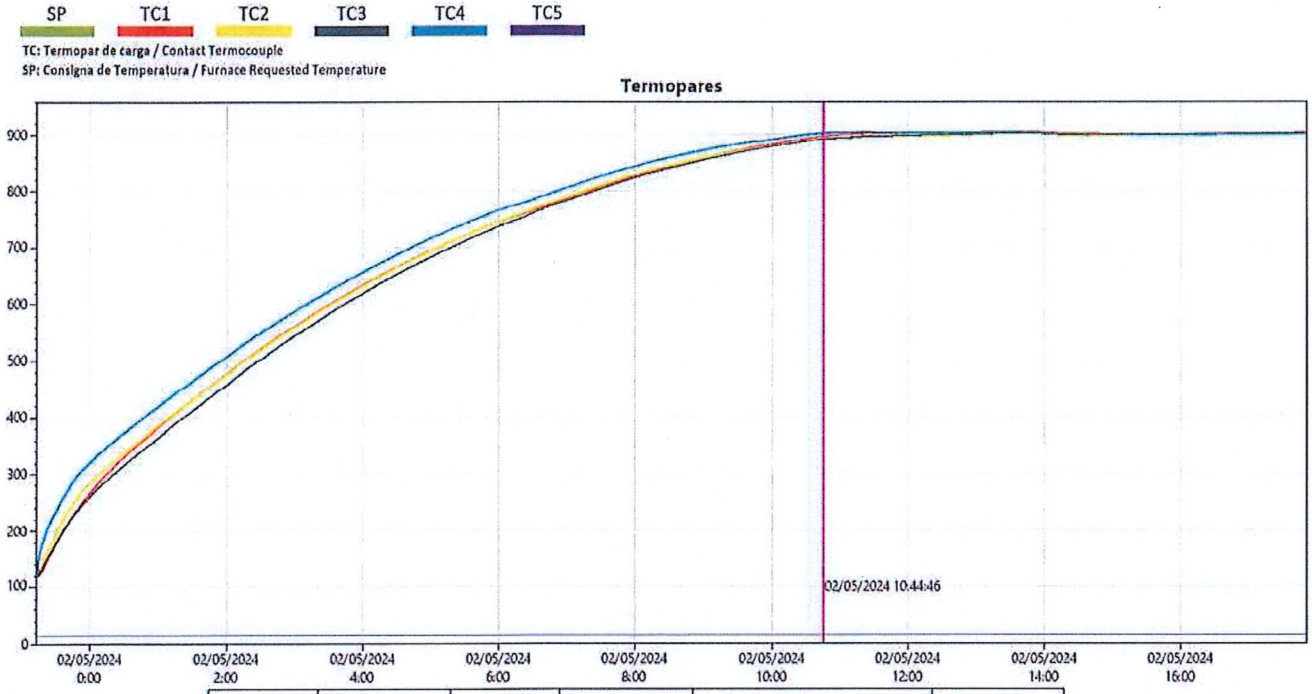
ESPECIFICACIÓN DE TRATAMIENTO TÉRMICO / SPECIFICATION FOR HEAT TREATMENT	Normalizado según / Normalized according IN_FIR_PT_04/10/24

FIHI Forging Industry S.L.

FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

GRÁFICO DE TRATAMIENTO / TREATMENT CHART



REF.TC1	94321-12	REF.TC2	94321-24	REF.TC3	94321-1
REF.TC4	94321-11	REF.TC5	NO APLICA	REF. LASER OPTICO	

Conformidad de Tratamiento Termico

Conformity of Heat Treatment

Nombre de responsable / Responsible: Jesús Arruti

OBSERVACIONES	

FRANCESCO PARISE
ENGIVEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI Forging Industry S.L.

GRI Flanges Iraeta FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

						M5018400	(5)							
						M5018780	(1)*							
						M5018778	(2)**							
						1392810**	C/466767							
						1395442	C/482505							
					TC4>>>	1395443	C/482505							
					TC3>>>	1395445	C/482504							
						1395444	C/482505							
					TC2>>>	1395446	C/482504							
					TC1>>>	1397272*	C/466767							

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13./05./2024.

FIHI Forging Industry S.L.

FIHI FORGING INDUSTRY, S.L.
Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

FECHA DE EMISIÓN / DATE OF ISSUE:		09/05/2024
CLIENTE	Nombre	FIHI Forging Industry, S.L.
	Dirección	Bº Txiriboga, s/n 20740 Zestoa (Gipuzkoa) SPAIN Tel: +34 943 147 645
PEDIDO / ORDER		P24426
FECHA DE RECEPCIÓN / DATE OF RECEIPT		08/05/2024
REFERENCIA / REFERENCE		L-1392810
MATERIAL ENSAYADO / TESTED MATERIAL:		M5018778 C/466767

BUREAU VERITAS Validated / Review Materials Division 09 MAY 2024

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

CARACTERÍSITCAS MECÁNICAS / MECHANICAL PROPERTIES

Fecha / Date	Referencia /Reference	Sentido-ubicación/ Direction-location	Ensayo de tracción / Tensile test				
			Temperatura/ Temperature (ºC)	Diámetro/ Diameter (mm)	R_{eH} / U.Y.S. (MPa)	Rm / T.S. (MPa)	A/ Elongation (%)
09/05/2024	L-1392810	Longitudinal	21	10.04	357	519	32.2

Ensayo realizado según / Test carried out according to UNE-EN 6892-1:2020 Met. B y/and IN_FIR_LB_01_07

Fecha/ Date	Referencia/ Reference	Sentido-ubicación/ Direction-location	Ensayo de flexión por choque / Charpy Impact test			
				Energía absorbida / Absorbed Energy , KV_2 (J)		
			Temperatura/ Temperature (ºC)	Probeta / Specimen 1	Probeta / Specimen 2	Probeta / Specimen 3
09/05/2024	L-1392810	Longitudinal	-40	167	139	144
		Transversal (¼ espesor)	-40	53	64	71
		Transversal (½ espesor)	-40	54	49	47

Ensayo realizado según / Test carried out according to UNE-EN ISO 148-1:2017 y/ and IN_FIR_LB_01_06

Fecha / Date	Referencia / Reference	Ensayo de tracción en sentido del espesor / through thickness tensile test (Z)			
		Temperatura / Temperature (ºC)	Probeta / Specimen	Diámetro / Diameter (mm)	Estricción / Area reduction (%)
09/05/2024	L-1392810	22	1	9.95	66
		22	2	10.05	63
		22	3	9.98	63

Ensayo realizado según / Test carried out according to UNE-EN ISO 6892-1:2020 Met.B, UNE-EN 10164:2019 y/ and IN_FIR_LB_01_07

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

BUREAU VERITAS

F_FIR_LB_01_19_01_R2
Fecha rev. Formato: 06/06/2023

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.
Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

ANALISIS QUÍMICO / CHEMICAL ANALYSIS

Fecha / Date	Referencia / Reference	Composición / Composition (%)						
		C	Si	Mn	P	S	Cr	Mo
09/05/2024	L-1392810	0.161	0.31	1.28	0.012	0.010	0.11	0.016
	C/466767*	0.147	0.32	1.33	0.013	0.009	0.11	0.02
Fecha / Date	**Referencia / Reference**	**Ni**	**Cu**	**V**	**Al**	**Nb**	**Ti**	**N**
09/05/2024	L-1392810	0.06	0.11	0.068	0.021	0.002	0.004	0.0058
	C/466767*	0.07	0.12	0.072	0.029	0.003	0.0048	0.0098

Ensayo realizado según / Test carried out according to IN_FIR_LB_01_01 y/and IN_FIR_LB_01_04

Fecha / Date	Referencia / Reference	Parámetros calculados / Calculated parámeters	
		C_{EQ} (1) (C_{EQ}= C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15) (%)	C_{ET} (2) (C_{ET}= C + (Mn+Mo)/10 + (Cr+Cu)/20 + Ni/40) (%)
09/05/2024	L-1392810	0.426	N/A
	C/466767*	0.422	

(1) Parámetro calculado según / Calculated parameter according to EN-10025-1:2006

(2) Parámetro calculado según / Calculated parameter according to EN-1011-2:2001

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

Witness / Witness
09 MAY 2024
BUREAU VERITAS

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

OBSERVACIONES / COMMENTS

*Datos proporcionados por el proveedor / Data provided by supplier

FIRMA / SIGNATURE

Witness
09 MAY 2024

FIHI Forging Industry S.L.

Cristina Iparraguirre

Responsable de laboratorio /

Laboratory responsible

FRANCESCO PARISE
ENGIVEX Inspector on behalf of: ROSETTI MARINO
W ☑
R ☑
DATE: 09.05.2024

Los resultados de este Informe sólo afectan a las muestras sometidas a ensayo.
Está prohibida la reproducción total o parcial de este informe sin el consentimiento escrito de FIHI Forging Industry, S.L.
The results of this report refer only to the tested samples
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Information is marked as General and belongs to GRI

GRI Flanges Iraeta

FIHI FORGING INDUSTRY S.L

INFORME DE INSPECCIÓN POR ULTRASONIDOS Y VISUAL
ULTRASONIC AND VISUAL INSPECTION REPORT

Nº de Serie /Serial Nº:	OF::		M:	2022233	L:	1400647	Cliente / Customer:	ROSETTI MARINO S.P.A
							Plano Cliente / Customer Drawing:	TEST COUPON
Descripción / Description:	FLANGE							

Nombre del técnico / Name of the technician:	URTZI LANDA	Nivel / Level:	2
Organización de inspección / Examination organization:	FIHI FORGING INDUSTRY S.L.	Nº Certificado / Certificate No.:	E-A-004708-UT-2-MS-2

Identificación del equipo de inspección / Identification of used equipment:				OLYMPUS - EPOCH	
Identificación de bloque de referencia empleado / Identification of used reference block (s)					
V1-No.:	12545	V2-No.:	50434-20398	TIF-Block No.: FI-UT-BI	Other:
Verificación de palpadores / Probe check		☒ OK	☐ NO OK	Acoplante / Couplant:	ACEITE / OIL

Información palpadores utilizados (tipo, nº identificación, frecuencia y ángulo real de salida del palpador / Information of used probes (type, ID number, frecuency and the probes angle

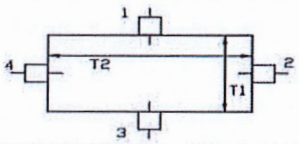
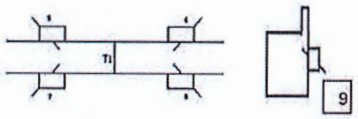
Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle	Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle
Probe 'A'	B4S	57746	4 Mhz / 0 °	Probe 'B'	DL4R	1370104	4 Mhz /0 °
Probe 'C'	SWB45-2	58414-52386	2 Mhz /45°	Probe 'D'	SWB70 -2	58416-51812	2 Mhz / 70 °
Probe 'E'				Probe 'F'			

Normas a aplicar / Standards to be apply		
Criterio de aceptación material base / Base material aceptance criteria	Criterio de aceptación Soldadura / Welds aceptance criteria	Criterio de aceptación inspección visual / Visual inspections acceptance criteria
EN 10308 clase 3		

Ganancia empleada para el nivel de referencia y valores usados para la corrección por perdidas por transferencia / Gain setting for reference level and values used for transfer corrections

ID Palpador / Probe ID	A:	B:	C:	D:	E:	F:
Método de ajuste / Method settings (*)	3	3	1	1		
Campo aplicación / Setting range	300 mm	300 mm	300 mm	300 mm	mm	mm
Nivel de referencia / Setting reference	(dia) 2 mm	(dia) 2 mm	(dia) 3 mm	(dia) 3 mm	(dia) mm	(dia) mm
Ajuste de la base / Basic set.-ref curve	dB	dB	dB	dB	dB	dB
Corrección perdida transferencia /Transfer correction	dB	dB	2 dB	2 dB	dB	dB
Ganancia adicional para la inspección / Extra gain for scanning	dB	dB	14 dB	14 dB	dB	dB
TOTAL	dB	dB	dB	dB	dB	dB

(*) Método de ajuste de la sensibilidad: 1- taladros laterales 2- Taladros de fondo plano 3- Curvas distancia amplitud (DAC)
(*) Method for setting of the sensitivity: 1 Side drilled holes 2- Flat bottom holes 3- Distance gain size (DGS)

Posición para la inspección de defectos longitudinales y laminación / Scanning position for longitudinal defects and lamination	Posición para la inspección de soldaduras / Scanning position for weldings inspection
	

Extension del examen / Extent of examination

Tipo de insp. / Type of insp. (2)	Espesor 1 / Thickness 1	Espesor 2 / Thickness 2	Palpador – Posición palpador / Probe- probe position	Área de inspección/ Inspection area
2	100 mm	mm	C5/C8 - C7/C8 - D5/D6 - D7/D8 - C9 / D9	100%
3	100 mm	320 mm	A1/A2 - B1/B2	100%
	mm	mm		%
	mm	mm		%

2) Tipo de inspección: 1: Insp. de aros laminados de sección rectangular 2: Insp. de las soldaduras 3: Insp. de aro fabricado en llanta de sección rectangular
2) Type of inspection: 1: Insp. of the seamless rolled ring with rectangular cross section 2: Insp. of the weld in the steel bar 3: Insp. of the ring made out of bars with rectangular cross section

Resultado de la inspección y marcas / Result of the examination and remarks: ☒ ACEPTABLE / ACCEPTABLE ☐ NO ACEPTABLE / NOT ACCEPTABLE	Firma Inspector / Technician signature: FIHI Forging Industry S.L. Fecha / Date: 12.04.2024
Responsable de NDT y supervisor / NDT responsible and supervisor: Urtzi Landa : E - A - 004708 - UT - 2 - MS - 2	Firma supervisor / Supervisor Signature: FIHI Forging Industry S.L.

F_FIR_IP_01_01_01_R0
FECHA REV. DOC.: 06/03/2023

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

GRI Flonges Iraeta

FIHI FORGING INDUSTRY, S.L.

QUALITY CERTIFICATE / CERTIFICADO CALIDAD

EN10204 3.2

Nº Certificado: Certificate Nº:	040000374468_06	Fecha: Date:	13.05.2024	Nº Cert. Ensayo: Test Cert. Nº:	FIHI024426
Cliente: Customer:	ROSETTI MARINO S.P.A.	Nº Pedido: Order Nº:	1724000344 123A90A	Nº Albarán: Delivery Note Nº:	200147415/10
Nº Plano Cliente: Customer Drawing Nº:	TEST COUPON			Cod. Artículo: Article Code:	2022233
Material: Material:	EN10025-3-S420NL	Trat. Térmico: Heat Treatment:	H5-0379 NORMALIZADO (+N) NORMALIZED (+N)	Estado Suministro: Delivery Condition:	MECANIZADO MACHINED

Cantidad Quantity	Descripción Artículos Articles description	Nº Colada Heat Nº	(1)Ref. Probeta(2) (1)Testing Piece Ref.(2)	Observaciones Observations
1	TEST COUPON -320x105x1400 (S420NL)-NL0S Ref. Test Cupón (Test Coupon) M-2022233 L/SN-1400646	466767	(EP)1392810-L (M) (T1)1392810(M) (T2)1392810 (M)	

(1) TIPO PROBETA/*Type:* -EP: TOCHO/*End Piece* -R: ARANDELA/*Ring* -C: CUPÓN/*Coupon*

(2) SITUACIÓN/*Location:* -M: MATERIAL BASE/*Base Material* -W: SOLDADURA/*Welding* -H: ZAT/*HAZ*

COMPOSICIÓN QUÍMICA (%) / CHEMICAL COMPOSITION (%)

Ref. Probeta *Testing Piece Ref.*	(3)	C	Si	Mn	P	S	Nb	V	Al (4)	Ti	Cr	Ni	Mo	Cu	N	B	O	CEV (5)
466767	L	0,1470	0,3200	1,3300	0,0130	0,0090	0,0030	0,0720	0,0290	0,0048	0,1100	0,0700	0,0200	0,1200	0,0098	-	-	0,4220
(EP)1392810-L (M)	P	0,1610	0,3100	1,2800	0,0120	0,0100	0,0020	0,0680	0,0210	0,0040	0,1100	0,0600	0,0160	0,1100	0,0058	-	-	0,4260

(3) L = ANÁLISIS DE COLADA/*Laddle Analysis*
P = ANÁLISIS DE PRODUCTO/*Product Analysis*

(5) CEV% (EN-10025-1) = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15

(4)Si la cantidad de elementos fijadores del N es suficiente (Nb:0.015-0.06% o V: 0.02-0.12%), la cantidad mínima de Al no aplica (material acorde a EN10025/EN10028/EN10273) /The minimum value for aluminium does not apply if other N binding elements are present in sufficient quantity (Nb: 0.015-0.06% or V: 0.02-0.12%). (Materials according to EN10025/EN10028/EN10273)

CARACTERÍSTICAS MECÁNICAS / TAMAÑO GRANO - MECHANICAL PROPERTIES / GRAIN SIZE

Ref. Probeta *Testing Piece Ref.*	Ensayo de Tracción *Tensile Test* (ISO 6892-1)				Estricción (%) *Reduction of Area (%)* (EN 10164)			Resistencia al Impacto KV2 *Impact Strength KV2* (ISO 148-1)				Dureza *Hardness*	Tamaño de Grano *Grain Size*
	(6)	Resist. Tracción *Tensile Strength* Rm MPa	Límite Elástico *Yield Strength* ReH MPa	Alargamiento *Elongation* Lo=5d A %	(6)	Valores Unitarios *Unitary values* %	Media *Average* %	(6)	Valores Unitarios *Unitary Values* J	Media *Average* J	Temp./ *Temp.* °C	HBW (ISO 6506-1)	(ASTM E-112)
(EP)1392810-L (M)	L	519	357	32,2	Z	66-63-63	64	L	167-139-144 -	150 -	-40	-	-
(T1)1392810 (M)	-	-	-	-	-	-	-	T1	53-64-71 -	63 -	-40	-	-
(T2)1392810 (M)	-	-	-	-	-	-	-	T2	54-49-47 -	50 -	-40	-	-

FRANCESCO PARISE
EMGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 13/05/2024

(6) ORIENTACIÓN / *Orientation:* -T: TRANSVERSAL/*Transversal* -L: LONGITUDINAL/*Longitudinal* -Z: SENTIDO DEL ESPESOR/*Through thickness.*

DECLARACIÓN DE CONFORMIDAD *DECLARATION OF CONFORMITY:*

LOS PRODUCTOS INCLUIDOS EN EL PRESENTE DOCUMENTO SON CONFORMES CON LOS REQUISITOS DEL PEDIDO DE CLIENTE Y CON LOS DE LA(S) NORMA(S) DEL MATERIAL ARRIBA REFERIDO(S)

The product herein in this document has been made and tested in accordance with the requirements of the above mentioned order and standard.

VALIDADO POR
VALIDATED BY:

Departamento de Calidad:
Quality department:

Nora Lasa

BUREAU VERITAS
D.Herrera-Davila
13/May/2024

UK CA 2400
2400-CPR-20220126

CE 2451
2451-CPR-EN10025-2014.0001

FIHI Forging Industry S.L.

Environmental recommendations related to the product: At GRI Renewables we understand caring for the environment as a responsible management model in collaboration with our stakeholders, therefore, and with the aim of reducing the environmental impact of our activity and, therefore,of our production chain, we recommend to our clients and to all the parties involved in our life cycle, carry out a correct segregation and treatment of the waste generated, prioritizing its minimization, reuseand recycling, in accordance with the applicable legislation.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

Declaration of performance

The manufacturer

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

declares herewith, that the construction product

Test coupons produced by hot rolled products of structural steel according to EN 10025-1 with serial number

M-2022233 L-1400646

produced in factory

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

fulfills the requirements of the following EU-directive/s and harmonized specifications:

- **EN 10025-1**
- **EU 305**
- **EN 1090-1**
- **EN 1090-2 EXC 4**

The notified body/ies:

- **UKAS CPR: certified by TWI Certification Ltd /Notified body No. 2400 / Certificate No. 2400-CPR-20220126**
- **CE CPR: certified by DVS ZERT / Notified body No.2451 / Certificate No. 2451-CPR-EN10025-2014.0001.006**

And with customers specifications and drawings according to Purhase Order 1724000344

DRAWING	SPECIFICATION
TEST CUPÓN	123A90-DDL-ST-SP-90118 Document Class: 2 Rev.1, SPC-PRO-01Rev.2024-00, 123A90-DDL-ST-SP-90118_IFA REV.02 (05032024)

The performance of the products above is in conformity with the set of declared performance/s. This declaration of performance is issued in accordance with Regulation (EU) No 305/2011/EU and Construction products (amendment etc.) (EU exit) Regulations 2020, UK statutory instrument 2020, under the sole responsibility of the manufacturer identified above.

Zestoa, 13.05.2024
FIHI FORGING INDUSTRY S.L

FIHI Forging Industry S.L.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13/05/2024

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

Business ID /C.I.F.
B75225946

www.grupoiraeta.com
Tel. +34 943 147 645
Fax. +34 943 897 029

Information is marked as Restricted and belongs to GRI.

GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE 2451

UKCA 2400

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa)
SPAIN
08 - 22
2451-CPR-EN10025-2014.0001.006
2400-CPR-20220126

EN 10025-1
Hot rolled products of structural steels

Intended uses:	Building constructions or civil engineering
Tolerances on dimensions and shape:	Welded parts EN 10029 Class A
Elongation:	Normalized Steel EN 10025-3 S420NL
Tensile strength	
Yield strength	
Impact strength	
Weldability	
Durability:	NPD.
Regulated substance:	NPD.

FIHI FORGING INDUSTRY S.L
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20740 Zestoa (Gipuzkoa) SPAIN

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FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
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DATE: 13 / 05 / 2024

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GRI Flanges Iraeta

FIHI FORGING INDUSTRY, S.L.

CE & UKCA Marking used for Inspection Certificates according to EN 10204

CE

2451

2451-CPR-EN10025-2014.0001.006

UKCA

2400

2400-CPR-20220126

FRANCESCO PARISE

ENGINEX Inspector on behalf of: ROSSETTI MARINO

W ☐

R ☑

DATE: 13/05/2024

FIHI FORGING INDUSTRY S.L
Meagako errepidea, 10
20740 Zestoa (Gipuzkoa) SPAIN

Business ID /C.I.F.
B75225946

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Tel. +34 943 147 645
Fax. +34 943 897 029

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ACCIAIERIE BERTOLI SAFAU
ABSOLUTE STEEL QUALITY

ACCIAIERIE BERTOLI SAFAU SpA
Via Buttrio n.28 - Frazione Cargnacco - 33050 Pozzuolo del Friuli (UD)
Tel. +39 0432 613211 - Fax +39 0432 613209 - www.absacciai.it

CERTIFICATO DI COLLAUDO

Inspection Certificate 3.1/Certificat de reception 3.1/
Abnahmeprufzeugnis 3.1

N.	291974 / 1
Data	08.06.2021
COLATA N. Heat-Coulée-Schmelze	466767
Pag.	1 / 1

CLIENTE Customer-Client-Besteller	FIHI FORGING INDUSTRY S.L.	ORDINE Order-Commande-Bestellung	4500252451
PROFILO Shape-Section-Profili	CONTINUOUS CAST ROUND BARS , 600 MM -	STATO DI FORNITURA SupplyCondition-Etat de livraison	UNTREATED
ACCIAIO Steel-Acier-Stahl	S420	COMESSA/POS Sales Order/Pos:	1075944/10

CAPITOLATO ABS: Technical Specification: ABS

CAPITOLATO DI ANALISI: Material Specification: FORJAS IRAETA SP_FIR_DP_01_03_R0 03/09/2020

CAPITOLATO DI FORNITURA: Technical Delivery Requirements:

COMPOSIZIONE CHIMICA DI COLATA %

CAST ANALYSIS % - COMPOSITION CHIMIQUE DE COULEE % - SCHMELZE CHEMISCHE ANALYSE %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min		1,00							0,015			
Max	0,200	1,70	0,60	0,025	0,010	0,30	0,80	0,10	0,300	0,55	0,100	0,0500
Colata/Heat	0,147	1,33	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0048
	B (T)	V	Nb	As	Ca	Sb	Co	O/ppm	H/ppm	N/ppm	C EQ. LONG FORMULA	H1 TUNDISH
Min												
Max	0,0008	0,200	0,050	0,100	0,1000	0,100	0,300	20,00	2,00	250	0,460	2,0
Colata/Heat	0,0001	0,072	0,003	0,004	0,0014	0,001	0,009	8,00	0,70	98	0,422	1,7

COMPOSIZIONE CHIMICA SOLIDO%

CHEMICAL ANALYSIS II % - COMPOSITION CHIMIQUE II % - CHEMISCHE ZUSAMMENSETZUNG II %

	C	Mn	Si	P	S	Cr	Ni	Mo	Al (T)	Cu	Sn	Ti
Min												
Max												
Colata/Heat	0,145	1,34	0,32	0,013	0,009	0,11	0,07	0,02	0,029	0,12	0,006	0,0046
	B (T)	V	Nb	As	Ca	Sb	Co	C Eq. Formula				
Min												
Max												
Colata/Heat	0,0001	0,069	0,003	0,004	0,0014	0,001	0,009	0,421				

CARATT. MECCANICHE

MECHANICAL PROPERTIES - CARACTERISTIQUES MECANIQUE - MECHANISCHE EIGSNSCHAFTER

TRATTAMENTO TERMICO HEAT TREATMENT

NOTE

ANTIMIX 100 %

TEST CERTIFICATE ISSUED ACCORDING TO: EN 10204/3.1

"NO WELDING REPAIRS"

COUNTRY OF ORIGIN : ITALY

VACUUM DEGASSED STEEL .

ELECTRIC ARC FURNACE STEEL .

FINE GRAIN STEEL .

FULLY KILLED .

- Material free from lead, mercury, cadmium and hexavalent chromium (dir. 2000/53/CE - dir. 2011/65/UE as amended)
- Material with radioactivity not exceeding 0,1Bq/g (d.lgs. 230/1995 as amended)

CONTROLLO QUALITA'

QUALITY CONTROL - CONTROLE DE QUALITE - QUALITATSSTEILE

Company with a management system certified by IGQ to
ISO 9001 and IATF 16949

Verif.:Omar Tonetti

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO

W ☐

R ☑

DATE: 13 / 05 / 2021

FIHI Forging Industry S.L.

GRI Forges Iraeta FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

HORNO / FURNACE:	HO-05	Nº HORNADA / TREATMENT Nº:	H5-0379	MATERIAL / MATERIAL:	Aro
FECHA INICIO / STARTING DATE:	01/05/2024 23:13:00	FECHA FINAL / FINISHING DATE:	02/05/2024 17:53:09	PESO / WEIGHT [Kg]:	79175
PERMANENCIA REAL / REAL HOLDING TIME [min]:	429	PERMANENCIA PREVISTA / SCHEDULED HOLDING TIME [min]:	420	MAYOR ESPESOR / MAX. THICKNESS [mm]:	305

DESCRIPCIÓN MATERIAL MATERIAL DESCRIPTION	BATCH	ESPESOR (mm) / THICKNESS (mm)
M5018400 C/482504 (UND 2)	B-373312	240
M5018400 C/482505 (UND 3)	B-373311	240
M5018780 C/466767 (UND 1)(PROB 1)	B-374560	305
320x105x1400 C/466767(UND 2) (PROB 1)	L-1392810	105
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0
		0

FIHI FORGING INDUSTRY, S.L. certifica que el material detallado en el presente documento, ha sido sometido al tratamiento térmico según la especificación que se detalla en este documento

FIHI FORGING INDUSTRY, S.L. certifies that the detailed material of this document has been treated according the especification below referenced.

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13./05./2024

ESPECIFICACIÓN DE TRATAMIENTO TÉRMICO / SPECIFICATION FOR HEAT TREATMENT	Normalizado según / Normalized according IN_FIR_PT_04/10/24

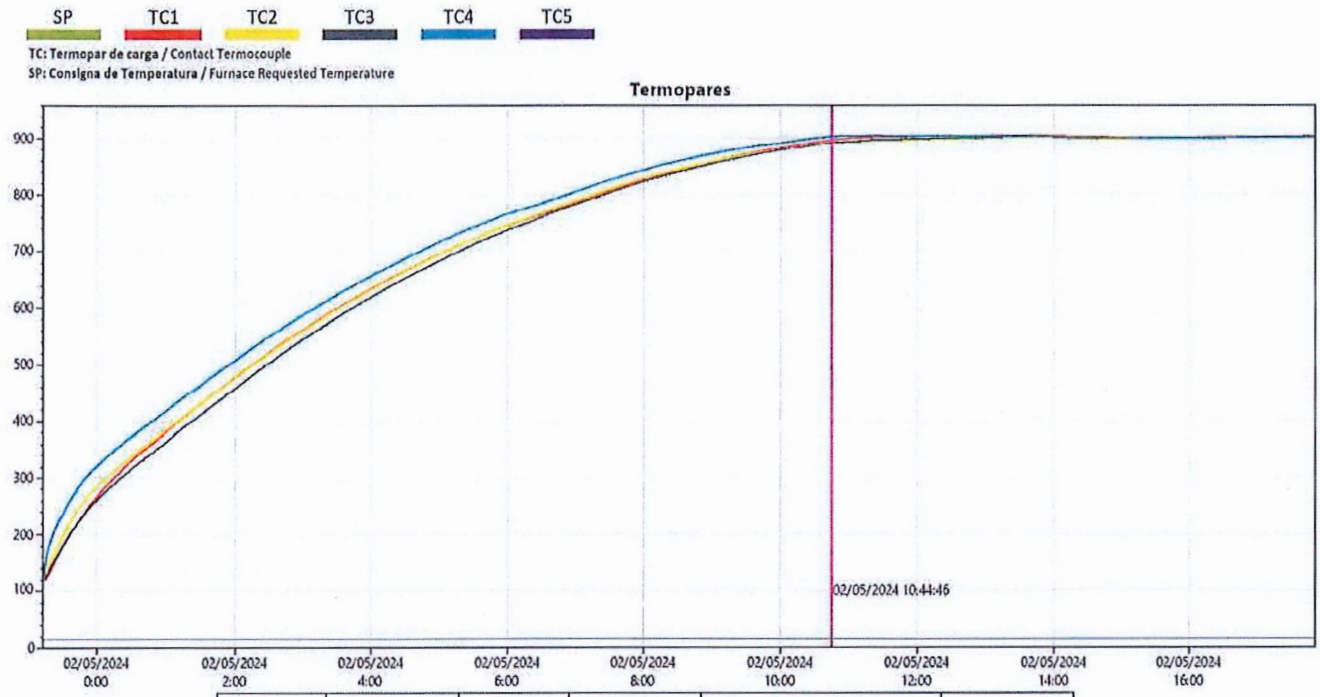
FIHI Forging Industry S.L.

1355/ 3402

FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

GRÁFICO DE TRATAMIENTO / TREATMENT CHART



REF.TC1	94321-12	REF.TC2	94321-24	REF.TC3	94321-1
REF.TC4	94321-11	REF.TC5	NO APLICA	REF. LASER OPTICO	

Conformidad de Tratamiento Termico

Conformity of Heat Treatment

Nombre de responsable / Responsible: Jesús Arruti

OBSERVACIONES	

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

FIHI Forging Industry S.L.

GRI Forges Iraeta FIHI FORGING INDUSTRY, S.L.	Certificado de tratamiento térmico Heat treatment certificate

Nº CERTIFICADO / CERTIFICATE Nº	H5-0379

						M5018400	(5)							
						M5018780	(1)*							
						M5018778	(2)**							
						1392810**	C/466767							
						1395442	C/482505							
					TC4>>>	1395443	C/482505							
					TC3>>>	1395445	C/482504							
						1395444	C/482505							
					TC2>>>	1395446	C/482504							
					TC1>>>	1397272*	C/466767							

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
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DATE: 13/05/2024

FIHI Forging Industry S.L.

FIHI FORGING INDUSTRY, S.L.

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Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

FECHA DE EMISIÓN / DATE OF ISSUE:		09/05/2024
CLIENTE	Nombre	FIHI Forging Industry, S.L.
	Dirección	Bº Txiriboga, s/n 20740 Zestoa (Gipuzkoa) SPAIN Tel: +34 943 147 645
PEDIDO / ORDER		P24426
FECHA DE RECEPCIÓN / DATE OF RECEIPT		08/05/2024
REFERENCIA / REFERENCE		L-1392810
MATERIAL ENSAYADO / TESTED MATERIAL:		M5018778 C/466767

Validated & Review
Dolores Dávila
09 MAY 2024
BUREAU VERITAS

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.
Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

CARACTERÍSITCAS MECÁNICAS / MECHANICAL PROPERTIES

Fecha / Date	Referencia /Reference	Sentido-ubicación/ Direction-location	Ensayo de tracción / Tensile test				
			Temperatura/ Temperature (ºC)	Diámetro/ Diameter (mm)	R_{eH} / U.Y.S. (MPa)	Rm / T.S. (MPa)	A/ Elongation (%)
09/05/2024	L-1392810	Longitudinal	21	10.04	357	519	32.2

Ensayo realizado según / Test carried out according to UNE-EN 6892-1:2020 Met. B y/and IN_FIR_LB_01_07

Fecha/ Date	Referencia/ Reference	Sentido-ubicación/ Direction-location	Ensayo de flexión por choque / Charpy Impact test			
			Energía absorbida / Absorbed Energy , KV_2 (J)			
			Temperatura/ Temperature (ºC)	Probeta / Specimen 1	Probeta / Specimen 2	Probeta / Specimen 3
09/05/2024	L-1392810	Longitudinal	-40	167	139	144
		Transversal (¼ espesor)	-40	53	64	71
		Transversal (½ espesor)	-40	54	49	47

Ensayo realizado según / Test carried out according to UNE-EN ISO 148-1:2017 y/ and IN_FIR_LB_01_06

Fecha / Date	Referencia / Reference	Ensayo de tracción en sentido del espesor / through thickness tensile test (Z)			
		Temperatura / Temperature (ºC)	Probeta / Specimen	Diámetro / Diameter (mm)	Estricción / Area reduction (%)
09/05/2024	L-1392810	22	1	9.95	66
		22	2	10.05	63
		22	3	9.98	63

Ensayo realizado según / Test carried out according to UNE-EN ISO 6892-1:2020 Met.B, UNE-EN 10164:2019 y/ and IN_FIR_LB_01_07

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

09 MAY 2024
BUREAU VERITAS

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

Bº Txiriboga, s/n
20740 Zestoa (Gipuzkoa) SPAIN
Tel: +34 943 147645
Fax: +34 943 148059

GRI Flanges Iraeta

CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

ANALISIS QUÍMICO / CHEMICAL ANALYSIS

Fecha / Date	Referencia / Reference	Composición / Composition (%)						
		C	Si	Mn	P	S	Cr	Mo
09/05/2024	L-1392810	0.161	0.31	1.28	0.012	0.010	0.11	0.016
	C/466767*	0.147	0.32	1.33	0.013	0.009	0.11	0.02
Fecha / Date	Referencia / Reference	Ni	Cu	V	Al	Nb	Ti	N
09/05/2024	L-1392810	0.06	0.11	0.068	0.021	0.002	0.004	0.0058
	C/466767*	0.07	0.12	0.072	0.029	0.003	0.0048	0.0098

Ensayo realizado según / Test carried out according to IN_FIR_LB_01_01 y/and IN_FIR_LB_01_04

Fecha / Date	Referencia / Reference	Parámetros calculados / Calculated parámeters	
		C_{EQ} (1) (C_{EQ}= C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/15) (%)	C_{ET} (2) (C_{ET}= C + (Mn+Mo)/10 + (Cr+Cu)/20 + Ni/40) (%)
09/05/2024	L-1392810	0.426	N/A
	C/466767*	0.422	

(1) Parámetro calculado según / Calculated parameter according to EN-10025-1:2006

(2) Parámetro calculado según / Calculated parameter according to EN-1011-2:2001

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

Witness / Témoin
09 MAY 2024
BUREAU VERITAS

Information is marked as General and belongs to GRI

FIHI FORGING INDUSTRY, S.L.

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20740 Zestoa (Gipuzkoa) SPAIN
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CERTIFICADO DE ENSAYOS

INFORME NUMERO/ REPORT NUMBER:	FIHI024426

OBSERVACIONES / COMMENTS

*Datos proporcionados por el proveedor / Data provided by supplier

FIRMA / SIGNATURE

Witness

09 MAY 2024

FIHI Forging Industry S.L.

Cristina Iparraguirre

Responsable de laboratorio /

Laboratory responsible

FRANCESCO PARISE
ENGIVEX Inspector on behalf of: ROSETTI MARINO
W ☑
R ☑
DATE: 09/05/2024

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The results of this report refer only to the tested samples
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F_FIR_LB_01_19_01_R2
Fecha rev. Formato: 06/06/2023

Information is marked as General and belongs to GRI

GRI Flanges Iraeta

FIHI FORGING INDUSTRY S.L

INFORME DE INSPECCIÓN POR ULTRASONIDOS Y VISUAL
ULTRASONIC AND VISUAL INSPECTION REPORT

Nº de Serie /Serial Nº:	OF::		M:	2022233	L:	1400646	Cliente / Customer:	ROSETTI MARINO S.P.A
							Plano Cliente / Customer Drawing:	TEST COUPON
Descripción / Description:	FLANGE							

Nombre del técnico / Name of the technician:	URTZI LANDA	Nivel / Level:	2
Organización de inspección / Examination organization:	FIHI FORGING INDUSTRY S.L.	Nº Certificado / Certificate No.:	E-A-004708-UT-2-MS-2

Identificación del equipo de inspección / Identification of used equipment:				OLYMPUS - EPOCH			
Identificación de bloque de referencia empleado / Identification of used reference block (s)							
V1-No.:	12545	V2-No.:	50434-20398	TIF-Block No.:	FI-UT-BI	Other:	
Verificación de palpadores / Probe check		☒ OK	☐ NO OK	Acoplante / Couplant:		ACEITE / OIL	

Información palpadores utilizados (tipo, nº identificación, frecuencia y ángulo real de salida del palpador / Information of used probes (type, ID number, frecuency and the probes angle

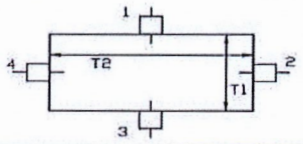
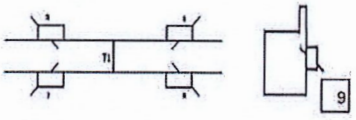
Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle	Palpador / Probe	Tipo Palpador / Probe type	Nº Identificación / Id. No.	Frec. ángulo / Freq angle
Probe "A"	B4S	57746	4 Mhz / 0 °	Probe "B"	DL4R	1370104	4 Mhz /0 °
Probe "C"	SWB45-2	58414-52386	2 Mhz /45°	Probe "D"	SWB70 -2	58416-51812	2 Mhz / 70 °
Probe "E"				Probe "F"			

Normas a aplicar / Standards to be apply		
Criterio de aceptación material base / Base material aceptance criteria	Criterio de aceptación Soldadura / Welds aceptance criteria	Criterio de aceptación inspección visual / Visual inspections acceptance criteria
EN 10308 clase 3		

Ganancia empleada para el nivel de referencia y valores usados para la corrección por perdidas por transferencia / Gain setting for reference level and values used for transfer corrections

ID Palpador / Probe ID	A:	B:	C:	D:	E:	F:
Método de ajuste / Method settings (*)	3	3	1	1		
Campo aplicación / Setting range	300 mm	300 mm	300 mm	300 mm	mm	mm
Nivel de referencia / Setting reference	(dia) 2 mm	(dia) 2 mm	(dia) 3 mm	(dia) 3 mm	(dia) mm	(dia) mm
Ajuste de la base / Basic set.-ref curve	dB	dB	dB	dB	dB	dB
Corrección perdida transferencia / Transfer correction	dB	dB	2 dB	2 dB	dB	dB
Ganancia adicional para la inspección / Extra gain for scanning	dB	dB	14 dB	14 dB	dB	dB
TOTAL	dB	dB	dB	dB	dB	dB

(*) Método de ajuste de la sensibilidad: 1- taladros laterales 2- Taladros de fondo plano 3- Curvas distancia amplitud (DAC)
(*) Method for setting of the sensitivity: 1 Side drilled holes 2- Flat bottom holes 3- Distance gain size (DGS)

Posición para la inspección de defectos longitudinales y laminación / Scanning position for longitudinal defects and lamination	Posición para la inspección de soldaduras / Scanning position for weldings inspection
	

Extension del examen / Extent of examination

Tipo de insp. / Type of insp. (2)	Espesor 1 / Thickness 1	Espesor 2 / Thickness 2	Palpador – Posición palpador / Probe- probe position	Área de inspección / Inspection area
2	100 mm	mm	C5/C6 - C7/C8 - D5/D6 - D7/D8 - C9 / D9	100%
3	100 mm	320 mm	A1/A2 - B1/B2	100%
	mm	mm		%
	mm	mm		%

2) Tipo de inspección: 1: Insp. de aros laminados de sección rectangular 2: Insp. de las soldaduras 3: Insp. de aro fabricado en llanta de sección rectangular
2) Type of inspection: 1: Insp. of the seamless rolled ring with rectangular cross section 2: Insp. of the weld in the steel bar 3: Insp. of the ring made out of bars with rectangular cross section

Resultado de la inspección y marcas / Result of the examination and remarks: ☒ ACEPTABLE / ACCEPTABLE ☐ NO ACEPTABLE / NOT ACCEPTABLE	Firma Inspector / Technician signature: FIHI Forging Industry S.L. Fecha / Date: 12.04.2024
Responsable de NDT y supervisor / NDT responsible and supervisor: Urtzi Landa : E - A - 004708 - UT - 2 - MS - 2	Firma supervisor / Supervisor Signature: FIHI Forging Industry S.L.

F_FIR_IP_01_01_01_R0
FECHA REV. DOC.: 06/03/2023

FRANCESCO PARISE
ENGINEX Inspector on behalf of: ROSSETTI MARINO
W ☐
R ☑
DATE: 13 / 05 / 2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000385	123B00B	Q012400222

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400058 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500333**

Date: **08-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **29-03-2024**

final: **02-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000385 123B00B**

Description:

6 piece(s) of steel plate(s) **65091 kg** , as per attached inspection Certificate no.: **A0378902**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-2

Z02 Date 08-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378902**	**A08 Order-No.:**	**4500333**	**A07 OrderDat.**	22-02-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000385 123B00B

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008_00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
762468	252763/1	30	70,00	2600,0	7500	1		10.930	43693	08-04-2024	1PLATCS70017
765585	255934/1	90	30,00	3000,0	13000	1		9.345	43709	09-04-2024	1PLATCS30057
765585	255935/1	90	30,00	3000,0	13000	1		9.345	43709	09-04-2024	1PLATCS30057
765585	255936/1	90	30,00	3000,0	13000	1		9.342	43709	09-04-2024	1PLATCS30057
765585	255937/1	90	30,00	3000,0	13000	1		9.345	43709	09-04-2024	1PLATCS30057
869736	252762/1	40	70,00	2600,0	11500	1		16.784	43693	08-04-2024	1PLATCS70017
	Sum					**6**		**65.091**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
762468	.057	.175	1.540	.007	.0008	.031	.170	.550	.116	.013	.003	.028	.012	.0043	.0002	.0030	.0007	.0020	.0020	.0020	.41
765585	.029	.337	1.620	.008	.0010	.034	.164	.170	.004	.161	.003	.037	.011	.0045	.0002	.0020	.0023	.0020	.0020	.0020	.36
869736	.056	.183	1.540	.005	.0010	.029	.172	.520	.121	.011	.004	.027	.012	.0049	.0002	.0020	.0010	.0020	.0020	.0020	.41

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
762468	.17	.031	.043	7.21
765585	.14	.040	.051	7.56
869736	.17	.031	.043	5.92

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						405	500		17.0	
Set values	<=							675			93.00
762468	241390	Ø	10.04	F	V	T	470	588	A5	27.5	79.92
869736	252762	Ø	9.97	F	V	T	473	607	A5	24.9	77.94
	>=						420	520		17.0	
Set values	<=							700			93.00
765585	255935	30,0	30.32	F	O	T	535	602	A5	22.8	88.88
	255936	30,0	30.67	F	O	T	544	607	A5	24.2	89.63

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
762468	241390	CV 10x10	F	O	T	-40	344	316	306	322	
	241390	CV 10x10	F	K	T	-40	335	317	320	324	
765585	255935	CV 10x10	F	O	T	-40	379	116	377	291	
	255936	CV 10x10	F	O	T	-40	336	353	328	339	
869736	252762	CV 10x10	F	O	T	-40	300	296	321	306	
	252762	CV 10x10	F	K	T	-40	264	83	81	142	
>= Set values <=						-40	29	29	29	46	
762468	252763	CV 10x10	F	ZB2	T	-40	291	330	40	220	strain aged 5%, 60 min. at 250°C
765585	255936	CV 10x10	F	ZB2	T	-40	341	343	347	344	strain aged 5%, 60 min. at 250°C
869736	252762	CV 10x10	F	ZB2	T	-40	53	272	30	118	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43		
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV		samp.cond.
						°C	J	J	J	J		

F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						400	400	400	25	25	25	35
762468	241390	Ø	9.89	F	S	567	564	566	64	49	57	57
869736	253308	Ø	9.99	F	S	582	583	585	66	61	68	65
Set values >=						416	416	416	25	25	25	35
765585	255936	Ø	9.99	F	S	579	579	580	85	82	85	84

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
762468	252763	.057	.186	1.550	.007	.0010	.032	.181	.520	.121	.013	.004	.029	.013	.0056	.0002	.0040	.0010	.0020	.0020
765585	255935	.031	.331	1.620	.008	.0008	.037	.173	.170	.005	.159	.003	.036	.011	.0063	.0002	.0020	.0021	.0020	.0020
	255936	.031	.329	1.620	.008	.0008	.037	.173	.170	.005	.160	.003	.035	.011	.0061	.0002	.0020	.0020	.0020	.0020
869736	252051	.056	.184	1.540	.005	.0007	.028	.170	.520	.120	.011	.004	.027	.012	.0054	.0002	.0020	.0010	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.130	
762468	252763	.0020	.0020	.41	.17	.033	.046	5.71
765585	255935	.0020	.0020	.36	.14	.039	.050	5.87
	255936	.0020	.0020	.36	.14	.038	.049	6.07
869736	252051	.0020	.0020	.41	.17	.031	.043	5.19

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

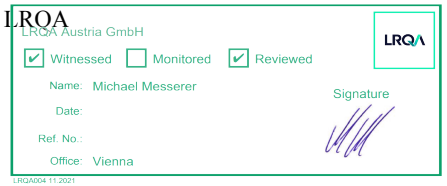
C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA



10-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 30, 40
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 90
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000385	123B00B	Q012400224

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400058 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500333**

Date: **11-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **04-04-2024**

final: **05-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000385 123B00B**

Description:

3 piece(s) of steel plate(s) **46179 kg** , as per attached inspection Certificate no.: **A0378976**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-3

Z02 Date 11-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378976**	**A08 Order-No.:**	**4500333**	**A07 OrderDat.** 22-02-2024	**Date of dispatch** 11-04-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000385 123B00B

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008_00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
869151	255993/1	40	70,00	2600,0	11500	1		16.791	43824	1PLATCS70017
958400	255994/1	40	70,00	2600,0	11500	1		16.798	43824	1PLATCS70017
958686	254567/1	60	50,00	2600,0	12000	1		12.590	43821	1PLATCS50045
		Sum				**3**		**46.179**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
869151	.054	.170	1.510	.004	.0008	.031	.186	.520	.124	.018	.005	.026	.012	.0053	.0002	.0020	.0015	.0020	.0020	.0020	.40
958400	.054	.181	1.510	.005	.0005	.030	.167	.520	.118	.039	.004	.026	.013	.0054	.0002	.0020	.0011	.0020	.0020	.0020	.40
958686	.031	.317	1.620	.005	.0007	.035	.164	.170	.006	.158	.004	.038	.013	.0054	.0002	.0020	.0019	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
869151	.16	.031	.043	5.85
958400	.16	.030	.043	5.56
958686	.14	.042	.055	6.48

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						405	500		17.0	
Set values	<=							675			93.00
869151	255993	Ø	9.97	F	V	T	441	579	A5	26.8	76.13
958400	255994	Ø	9.97	F	V	T	450	590	A5	28.6	76.27
	>=						415	500		17.0	
Set values	<=							675			93.00
958686	254567	Ø	9.95	F	V	T	510	598	A5	25.9	85.35

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
869151	255993	CV 10x10	F	O	T	-40	326	367	321	338	
	255993	CV 10x10	F	K	T	-40	351	355	326	344	
958400	255994	CV 10x10	F	O	T	-40	371	384	331	362	
	255994	CV 10x10	F	K	T	-40	347	364	325	345	
958686	254567	CV 10x10	F	O	T	-40	353	360	351	355	
	254567	CV 10x10	F	K	T	-40	371	368	365	368	
>= Set values <=						-40	29	29	29	46	
869151	255993	CV 10x10	F	ZB2	T	-40	317	306	321	314	strain aged 5%, 60 min. at 250°C
958400	255994	CV 10x10	F	ZB2	T	-40	315	321	218	285	strain aged 5%, 60 min. at 250°C
958686	254567	CV 10x10	F	ZB2	T	-40	338	327	335	333	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	C01 SpThickn MM	C02 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>= Set values <=						400	400	400	25	25	25	35
869151	255993	Ø	9.98	F	S	577	575	578	77	73	79	76
958400	255994	Ø	9.99	F	S	583	582	579	67	67	72	69
958686	254567	Ø	9.94	F	S	566	568	570	84	83	81	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869151	246512	.057	.167	1.520	.004	.0008	.031	.184	.530	.124	.017	.005	.026	.012	.0050	.0002	.0020	.0012	.0020	.0020
958400	246518	.056	.181	1.520	.005	.0009	.027	.176	.510	.121	.037	.004	.026	.012	.0045	.0002	.0020	.0010	.0020	.0020
958686	254567	.033	.324	1.600	.005	.0009	.036	.172	.170	.007	.157	.004	.037	.013	.0060	.0002	.0020	.0021	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.43	.22	.120	.130	
869151	246512	.0020	.0020	.41	.17	.031	.043	6.20
958400	246518	.0020	.0020	.41	.17	.030	.042	6.00
958686	254567	.0020	.0020	.36	.15	.041	.054	6.00

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Remarks

certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
LRQA
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Signature
Ref. No.:
Office: Vienna
LRQA004 11-2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000385	123B00B	Q012400294

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani — **06.05.2024**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400058 / 4**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500333**

Date: **19-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **09-04-2024**

final: **12-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000385 123B00B**

Description:

9 piece(s) of steel plate(s) **80839 kg** , as per attached inspection Certificate no.: **A0379028**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-4

Z02 Date 19-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0379028**	**A08 Order-No.:**	**4500333**	**A07 OrderDat.**	22-02-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000385 123B00B

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008_00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
765585	255894/1	80	45,00	2500,0	12000	1		10.812	43909	15-04-2024	1PLATCS45033
765585	255895/1	70	45,00	2600,0	9000	1		8.395	43909	15-04-2024	1PLATCS45033
765585	255896/1	80	45,00	2500,0	12000	1		10.824	43909	15-04-2024	1PLATCS45033
765585	255897/1	70	45,00	2600,0	9000	1		8.431	43909	15-04-2024	1PLATCS45033
765585	255899/1	70	45,00	2600,0	9000	1		8.424	43909	15-04-2024	1PLATCS45033
765585	255901/1	70	45,00	2600,0	9000	1		8.406	43894	17-04-2024	1PLATCS45033
765586	259122/1	90	30,00	3000,0	13000	1		9.339	44086	18-04-2024	1PLATCS30057
765586	259123/1	90	30,00	3000,0	13000	1		9.345	44096	18-04-2024	1PLATCS30057
869736	253308/1	20	75,00	1900,0	6000	1		6.863	44034	17-04-2024	1PLATCS75013
	Sum					**9**		**80.839**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
765585	.029	.337	1.620	.008	.0010	.034	.164	.170	.004	.161	.003	.037	.011	.0045	.0002	.0020	.0023	.0020	.0020	.0020	.36
765586	.036	.329	1.630	.005	.0009	.038	.188	.170	.006	.158	.004	.036	.012	.0051	.0003	.0020	.0019	.0020	.0020	.0020	.37
869736	.056	.183	1.540	.005	.0010	.029	.172	.520	.121	.011	.004	.027	.012	.0049	.0002	.0020	.0010	.0020	.0020	.0020	.41

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
765585	.14	.040	.051	7.56
765586	.15	.040	.052	7.45
869736	.17	.031	.043	5.92

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
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LRQA
LRQA Austria GmbH
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Name: Michael Messerer
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Signature
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voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						405	500		17.0	
Set values	<=							675			93.00
869736	253308	Ø	9.99	F	V	T	446	590	A5	26.4	75.52
	>=						415	500		17.0	
Set values	<=							675			93.00
765585	255896	Ø	9.99	F	V	T	498	597	A5	27.1	83.45
	255897	Ø	10.00	F	V	T	491	591	A5	26.0	83.13
	>=						420	520		17.0	
Set values	<=							700			93.00
765586	259122	30,0	30.37	F	O	T	553	616	A5	22.1	89.72

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
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voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
765585	255896	CV 10x10	F	O	T	-40	378	363	370	371	
	255897	CV 10x10	F	O	T	-40	369	373	377	373	
	255896	CV 10x10	F	K	T	-40	405	401	413	406	
	255897	CV 10x10	F	K	T	-40	400	398	401	400	
765586	259122	CV 10x10	F	O	T	-40	349	302	353	335	
869736	253308	CV 10x10	F	O	T	-40	242	307	295	281	
	253308	CV 10x10	F	K	T	-40	178	260	261	233	
>= Set values <=						-40	29	29	29	46	
765585	255897	CV 10x10	F	ZB2	T	-40	334	337	34	235	strain aged 5%, 60 min. at 250°C
765586	259122	CV 10x10	F	ZB2	T	-40	293	35	321	216	strain aged 5%, 60 min. at 250°C
869736	253308	CV 10x10	F	ZB2	T	-40	224	268	264	252	strain aged 5%, 60 min. at 250°C

C40;shape:

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Inspection representative voestalpine
Gabriel Marco

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LRQA Austria GmbH
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Signature
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voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43		
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV		samp.cond.
						°C	J	J	J	J		

CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
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Office: Vienna
Signature
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02-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						400	400	400	25	25	25	35
Set values <=												
765585	255936	Ø	9.99	F	S	579	579	580	85	82	85	84
869736	253308	Ø	9.99	F	S	582	583	585	66	61	68	65
>=						416	416	416	25	25	25	35
Set values <=												
765586	255900	Ø	9.97	F	S	581	580	579	82	72	82	79

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
765585	255896	.032	.326	1.620	.006	.0010	.036	.180	.170	.005	.159	.004	.036	.012	.0052	.0003	.0020	.0017	.0020	.0020
	255935	.031	.331	1.620	.008	.0008	.037	.173	.170	.005	.159	.003	.036	.011	.0063	.0002	.0020	.0021	.0020	.0020
	255936	.031	.329	1.620	.008	.0008	.037	.173	.170	.005	.160	.003	.035	.011	.0061	.0002	.0020	.0020	.0020	.0020
765586	257394	.037	.324	1.630	.005	.0010	.037	.185	.170	.006	.158	.003	.036	.012	.0053	.0003	.0020	.0018	.0020	.0020
	259123	.038	.326	1.620	.005	.0004	.038	.184	.170	.007	.156	.003	.035	.012	.0050	.0002	.0020	.0019	.0020	.0020
869736	252050	.056	.184	1.540	.005	.0008	.028	.171	.520	.120	.011	.004	.027	.012	.0054	.0002	.0020	.0010	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.130	
765585	255896	.0020	.0020	.36	.15	.040	.052	6.92
	255935	.0020	.0020	.36	.14	.039	.050	5.87
	255936	.0020	.0020	.36	.14	.038	.049	6.07
765586	257394	.0020	.0020	.37	.15	.039	.051	6.98
	259123	.0020	.0020	.37	.15	.038	.050	7.60
869736	252050	.0020	.0020	.41	.17	.031	.043	5.19

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 20
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 70, 80, 90
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000385	123B00B	Q012400356

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

28.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400058 / 5**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500333**

Date: **24-04-2024**

Order Status: **complete**

Inspection Dates
First: **10-04-2024**

final: **12-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000385 123B00B**

Description:

4 piece(s) of steel plate(s) **42908 kg** , as per attached inspection Certificate no.: **A0379051**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-5 K

Z02 Date 24-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0379051**	**A08 Order-No.:**	**4500333**	**A07 OrderDat.**	22-02-2024	**Date of dispatch**	23-04-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000385 123B00B

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008_00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
765586	255898/1	80	45,00	2500,0	12000	1		10.799	44276	1PLATCS45033
765586	255900/1	80	45,00	2500,0	12000	1		10.812	44276	1PLATCS45033
765586	257392/1	50	60,00	2600,0	8500	1		10.646	44276	1PLATCS60034
765586	257394/1	50	60,00	2600,0	8500	1		10.651	44276	1PLATCS60034
	Sum					**4**		**42.908**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
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06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
765586	.036	.329	1.630	.005	.0009	.038	.188	.170	.006	.158	.004	.036	.012	.0051	.0003	.0020	.0019	.0020	.0020	.0020	.37

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
765586	.15	.040	.052	7.45

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
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LRQA
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voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							415	500		17.0	
Set values <=								675			93.00
765586	255900	Ø	9.99	F	V	T	507	611	A5	27.1	82.99
	257392	Ø	9.96	F	V	T	431	559	A5	27.6	77.06

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
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voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
765586	255900	CV 10x10	F	O	T	-40	364	379	385	376	
	257392	CV 10x10	F	O	T	-40	375	394	378	382	
	255900	CV 10x10	F	K	T	-40	421	393	409	407	
	257392	CV 10x10	F	K	T	-40	391	387	404	394	
>= Set values <=						-40	29	29	29	46	
765586	255900	CV 10x10	F	ZB2	T	-40	320	346	330	332	strain aged 5%, 60 min. at 250°C
	257392	CV 10x10	F	ZB2	T	-40	334	41	317	231	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C42 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	C01 SpThickn MM	C02 loc.	C12 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						400	400	400	25	25	25	35
765586	255900	Ø	9.97	F	S	581	580	579	82	72	82	79
	257392	Ø	10.00	F	S	554	554	553	83	84	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
765586	255900	.036	.324	1.620	.005	.0008	.037	.186	.170	.005	.158	.004	.036	.012	.0056	.0003	.0020	.0018	.0020	.0020
	257394	.037	.324	1.630	.005	.0010	.037	.185	.170	.006	.158	.003	.036	.012	.0053	.0003	.0020	.0018	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.43	.22	.120	.130	
765586	255900	.0020	.0020	.37	.15	.040	.052	6.61
	257394	.0020	.0020	.37	.15	.039	.051	6.98

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 50
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 80
Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

06-MAY-2024

voestalpine
ONE STEP AHEAD.

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
VOESTALPINE GROBBLECH GMBH	SEE NOTE	123B00	Q012401349

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

- **PO** 1724000100: HEAT 764715
- **PO** 1724000102: HEAT 764227
  HEAT 869149
  HEAT 958396
- **PO** 1724000345: HEAT 765585
  HEAT 869498
  HEAT 958686

INSPECTA S.R.L.	**TEST REPORT** ***RAPPORTO DI PROVA***		ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO LAB N°1607 L
	N°131-00250-24 **Data: 10/03/2025**	**Rev.00**	

Object: *Oggetto:*	**IMPACT TEST ON BASE MATERIAL**				Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS**	**SEE REMARKS**	
		# Informazione fornita dal cliente/ Information provided by the customer			
Customer: *Committente:*	**ROSETTI MARINO S.p.A.**				
Address: *Indirizzo:*	**Via Trieste, 230 – 48122 Ravenna - ITALY**				
Final customer: *Cliente finale:*	//				
Your delivery note n°: *Vs. DDT di consegna*	**n°** // *n°*	**Date:** *Data:* //	**MD52** *MD 52*	**148/2024**	**Date:** *Data:* **23/12/2024**
Start of activities: *Inizio prove:*	**Date:** *Data:* **10/03/2025**	**End of activities:** *Fine prove:*			**Date:** *Data:* **10/03/2025**

PROVE RICHIESTE

☐ **TENSILE TEST**/*Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST**/*Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root /*Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST**/*Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST** / *Macrografia*		
☐ **HARDNESS TEST**/ *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST**/ *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS**/*Analisi Chimica*		
☐ **MICROEXAMINATION TEST** / *Micrografia*		
☐ **OTHER (Specify)**/ *Altro (Specificare)*		

Allegati /Attachments: NONE

NOTE/ Remarks: **NSC-CDA-N38-OSS-ENG-00059-08 SST-DES-DWG**

Informazioni aggiuntive fornite dal cliente:

Additional information provided by the customer

Specimen ID	Thickness	Base Material	Heat n°	Plate/Batch n°
561/24	85	EN 10225-2 S460MLO	869149	247745/1
562/24	85	EN 10225-2 S460MLO	958396	250962/1
563/24	30	EN 10225-2 S460MLO	765585	255935/1
564/24	50	EN 10225-2 S460MLO	764715	245887/2
565/24	50	EN 10225-2 S460MLO	869498	253315/1
566/24	50	EN 10225-2 S460MLO	958686	254567/1
567/24	55	EN 10225-2 S460MLO	764227	250940/1

Laboratory Responsible *Responsabile Laboratorio* *Sig. Nicola Pini*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
- INSPECTA srl - Laboratory Responsible 10/03/2025	B2MA 10/3/2025	WITNESSED SURVEYOR G. TESEI DATE 10/03/2025

I risultati contenuti nel presente rapporto di prova si riferiscono unicamente al campione sottoposto a prova. Il committente si impegna a riprodurre integralmente il rapporto di prova. E' vietata ogni forma di riproduzione parziale. L'accreditamento ACCREDIA non significa approvazione del prodotto da parte dell'ente di accreditamento e del laboratorio. I risultati di prova si riferiscono al campione così come ricevuto, essendo il campionamento eseguito dal cliente. Ove indicato l'incertezza di misura è da intendersi incertezza estesa, corrispondente ad un fattore di copertura Ku= 2 equivalente ad un livello di fiducia pari a 95%. Quando emesso il Report in revisione, l'oggetto revisionato è identificabile mediante barra verticale posta sul lato sinistro e dal testo in formato corsivo sottolineato.
Inspecta declina ogni responsabilità nel riportare sul rapporto di prova informazioni fornite dal cliente.
The results in this test report refers only to the specimen that has been tested. The customer undertakes to print out/reproduce the test report. Any partial reproduction is prohibited. Accredia's accreditation does not imply the product approval neither by the accreditation body or the laboratory. The test results refer to the sample as received, since the sampling is performed by the customer. Where indicated the measurement uncertainty is to be understood expanded uncertainty corresponding to a coverage factor Ku=2 equivalent to a level of confidence of 95 %. When the Report under review is issued, the revised object can be identified by the vertical bar on the left side and by the text in italics underlined. Inspecta declines any responsibility in reporting information provided by the customer on the test report..

Headquarter: Via G.Giolitti 10 – 48123 Ravenna (RA) Italy – Phone /Fax + 39 0544 451424
Mobile +39 3515227934 - e-mail: inspectasrl@inspectasrl.com - www.inspectasrl.com - P.iva 03944480403
Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:10/03/2025
Data esecuzione prova:

performed in accordance with the standard / eseguita in conformità alla norma UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna* **:PP09 rev.09**

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / *coltello*	Requirement / Requisiti: Energy absorbed/ / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
561/24 BM	T	10x10x55	-60°C	V	2	335	366	348	350	/	/	/	/	/	/	/	SURFACE
561/24 BM	T	10x10x55	-60°C	V	2	365	351	340	352	/	/	/	/	/	/	/	1/2 THK
562/24 BM	T	10x10x55	-60°C	V	2	353	351	351	352	/	/	/	/	/	/	/	SURFACE
562/24 BM	T	10x10x55	-60°C	V	2	339	350	340	343	/	/	/	/	/	/	/	1/2 THK
563/24 BM	T	10x10x55	-50°C	V	2	365	354	344	354	/	/	/	/	/	/	/	SURFACE
564/24 BM	T	10x10x55	-60°C	V	2	359	352	364	358	/	/	/	/	/	/	/	SURFACE
564/24 BM	T	10x10x55	-60°C	V	2	352	350	371	358	/	/	/	/	/	/	/	1/2 THK
565/24 BM	T	10x10x55	-60°C	V	2	364	356	343	354	/	/	/	/	/	/	/	SURFACE
565/24 BM	T	10x10x55	-60°C	V	2	353	344	363	353	/	/	/	/	/	/	/	1/2 THK
566/24 BM	T	10x10x55	-60°C	V	2	368	355	380	368	/	/	/	/	/	/	/	SURFACE
566/24 BM	T	10x10x55	-60°C	V	2	346	354	361	354	/	/	/	/	/	/	/	1/2 THK
567/24 BM	T	10x10x55	-60°C	V	2	364	349	341	351	/	/	/	/	/	/	/	SURFACE
567/24 BM	T	10x10x55	-60°C	V	2	337	365	390	364	/	/	/	/	/	/	/	1/2 THK

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:*	//
Legend *Legenda*	**L**= Longitudinal / Longitudinale **T**= Trasversal / Trasversale **VWT 0/2** = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* **VHT 0/2** = Impact Test on Fusion Line / *Resilienza Trasversale in linea di fusione* **VHT 1/2** = Impact Test at 1mm from Fusion Line / *Resilienza trasversale a 1 mm dalla linea di fusione* **VHT 2/2** = Impact Test at 2 mm from Fusion Line / *Resilienza trasversale a 2 mm dalla linea di fusione* **VHT 5/2** = Impact Test at 5 mm from Fusion Line / *Resilienza trasversale a 5 mm dalla linea di fusione* **WM** = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* **HAZ** = Impact Test on Heat Affected Zone / *Resilienza Trasversale in zona termicamente alterata* **BM** = Impact Test on Base Metal / *Resilienza Trasversale in materiale base* **FL** = Fusion Line/ *Linea di fusione* **FL+1** = Fusion Line + 1mm/ *Linea di fusione+1mm* **FL+2** = Fusion Line + 2mm/ *Linea di fusione+2mm* **FL +5**= Fusion Line + 5mm/ *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio* *Dott. Ing. Mauro Barcheschi*	Laboratory Responsible *Responsabile Laboratorio* *Sig. Nicola Fini*	Customer Inspector *Ispettore del cliente*	Third-part Inspector *Ispettore Terza parte*
INSPECTA srl Laboratory Technician 10/03/25	INSPECTA srl Laboratory Responsible 10/03/2025	B2MA 10/3/2025	BUREAU VERITAS FULLY WITNESSED SURVEYOR G. TESEI DATE 10/03/2025

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
VOESTALPINE GROBBLECH GMBH	1724000385	123B00	Q012401350

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

- HEAT 765585
- HEAT 765586
- HEAT 762468
- HEAT 869151
- HEAT 869736
- HEAT 958400

INSPECTA S.R.L.

TEST REPORT
RAPPORTO DI PROVA

N° 132-00250-24 | **Rev.00**
Data: 10/03/2025

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N°1607 L

Object: *Oggetto:*	**IMPACT TEST ON BASE MATERIAL**				Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS**	**SEE REMARKS**	
		# Informazione fornita dal cliente/ Information provided by the customer			
Customer: *Committente:*	**ROSETTI MARINO S.p.A.**				
Address: *Indirizzo:*	**Via Trieste, 230 – 48122 Ravenna - ITALY**				
Final customer: *Cliente finale:*	//				
Your delivery note n°: *Vs. DDT di consegna*	**n°** // **n°** //	**Date:** *Data:* //	**MD52** *MD 52*	**148/2024**	**Date:** *Data:* **23/12/2024**
Start of activities: *Inizio prove:*	**Date:** *Data:* **10/03/2025**	**End of activities:** *Fine prove:*			**Date:** *Data:* **10/03/2025**

PROVE RICHIESTE

☐ **TENSILE TEST/***Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST/***Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root */Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST/***Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST /** *Macrografia*		
☐ **HARDNESS TEST/** *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST/** *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS/***Analisi Chimica*		
☐ **MICROEXAMINATION TEST /** *Micrografia*		
☐ **OTHER (Specify)/** *Altro (Specificare)*		

Allegati /Attachments: NONE
NOTE/ Remarks: **NSC-CDA-N38-OSS-ENG-00059-08 SST-DES-DWG**
Informazioni aggiuntive fornite dal cliente:
Additional information provided by the customer

Specimen ID	Thickness	Base Material	Heat n°	Plate/Batch n°
568/24	60	EN 10225-2 S460MLO	765586	257392/1
569/24	70	EN 10225-2 S460MLO	762468	252763/1
570/24	70	EN 10225-2 S460MLO	869736	252762/1
571/24	70	EN 10225-2 S460MLO	869151	255993/1
572/24	70	EN 10225-2 S460MLO	958400	255994/1
573/24	45	EN 10225-2 S460MLO	765585	255894/1

Laboratory Responsible	Customer Inspector	Third part Inspector
Responsabile Laboratorio	*Ispettore del cliente*	*Ispettore Parte Terza*
Sig. Nicola Fini	B2MA	BUREAU VERITAS ITALY WITNESSED SURVEYOR G. TESEI DATE 10/03/2025
INSPECTA srl - Laboratory Responsible 10/03/2025	10/3/2025	

I risultati contenuti nel presente rapporto di prova si riferiscono unicamente al campione sottoposto a prova. Il committente si impegna a riprodurre integralmente il rapporto di prova. È vietata ogni forma di riproduzione parziale. L'accreditamento ACCREDIA non significa approvazione del prodotto da parte dell'ente di accreditamento e del laboratorio. I risultati di prova si riferiscono al campione così come ricevuto, essendo il campionamento eseguito dal cliente. Ove indicato l'incertezza di misura è da intendersi incertezza estesa, corrispondente ad un fattore di copertura Ku= 2 equivalente ad un livello di fiducia pari a 95%. Quando emesso il Report in revisione, l'oggetto revisionato è identificabile mediante barra verticale posta sul lato sinistro e dal testo in formato corsivo sottolineato.
Inspecta declina ogni responsabilità nel riportare sul rapporto di prova informazioni fornite dal cliente.
The results in this test report refers only to the specimen that has been tested. The customer undertakes to print out/reproduce the test report. Any partial reproduction is prohibited. Accredia's accreditation does not imply the product approval neither by the accreditation body or the laboratory. The test results refer to the sample as received, since the sampling is performed by the customer. Where indicated the measurement uncertainty is to be understood expanded uncertainty corresponding to a coverage factor Ku=2 equivalent to a level of confidence of 95 %. When the Report under review is issued, the revised object can be identified by the vertical bar on the left side and by the text in italics underlined. Inspecta declines any responsibility in reporting information provided by the customer on the test report..

Headquarter: Via G.Giolitti 10 – 48123 Ravenna (RA) Italy – Phone /Fax +39 0544 451424
Mobile +39 3515227934 - e-mail: inspectasrl@inspectasrl.com - www.inspectasrl.com - P.iva 03944480403
Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:10/03/2025
Data esecuzione prova:

performed in accordance with the standard / *eseguita in conformità alla norma* UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna* **:PP09 rev.09**

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / coltello	Requirement / Requisiti: Energy absorbed/ / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
568/24 BM	T	10x10x55	-60°C	V	2	384	345	353	361	/	/	/	/	/	/	/	SURFACE
568/24 BM	T	10x10x55	-60°C	V	2	379	362	360	367	/	/	/	/	/	/	/	1/2 THK
569/24 BM	T	10x10x55	-60°C	V	2	354	351	351	352	/	/	/	/	/	/	/	SURFACE
569/24 BM	T	10x10x55	-60°C	V	2	382	391	365	379	/	/	/	/	/	/	/	1/2 THK
570/24 BM	T	10x10x55	-60°C	V	2	355	374	347	359	/	/	/	/	/	/	/	SURFACE
570/24 BM	T	10x10x55	-60°C	V	2	366	374	358	366	/	/	/	/	/	/	/	1/2 THK
571/24 BM	T	10x10x55	-60°C	V	2	345	321	347	338	/	/	/	/	/	/	/	SURFACE
571/24 BM	T	10x10x55	-60°C	V	2	325	354	331	337	/	/	/	/	/	/	/	1/2 THK
572/24 BM	T	10x10x55	-60°C	V	2	341	322	336	333	/	/	/	/	/	/	/	SURFACE
572/24 BM	T	10x10x55	-60°C	V	2	320	333	329	327	/	/	/	/	/	/	/	1/2 THK
573/24 BM	T	10x10x55	-60°C	V	2	315	328	319	321	/	/	/	/	/	/	/	SURFACE
573/24 BM	T	10x10x55	-60°C	V	2	354	330	327	337	/	/	/	/	/	/	/	1/2 THK

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:*	//
Legend *Legenda*	L= Longitudinal / Longitudinale T= Trasversal / Trasversale VWT 0/2 = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* VHT 0/2 = Impact Test on Fusion Line / *Resilienza Trasversale in linea di fusione* VHT 1/2 = Impact Test at 1mm from Fusion Line / *Resilienza trasversale a 1 mm dalla linea di fusione* VHT 2/2 = Impact Test at 2 mm from Fusion Line / *Resilienza trasversale a 2 mm dalla linea di fusione* VHT 5/2 = Impact Test at 5 mm from Fusion Line / *Resilienza trasversale a 5 mm dalla linea di fusione* WM = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* HAZ = Impact Test on Heat Affected Zone / *Resilienza Trasversale in zona termicamente alterata* BM = Impact Test on Base Metal / *Resilienza Trasversale in materiale base* FL = Fusion Line/ *Linea di fusione* FL+1 = Fusion Line + 1mm/ *Linea di fusione+1mm* FL+2 = Fusion Line + 2mm/ *Linea di fusione+2mm* FL +5= Fusion Line + 5mm/ *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio* Dott. Ing. Marco Baccheschi	Laboratory Responsible *Responsabile Laboratorio* Sig. Nicola Fini	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
INSPECTA Laboratory Technician 10/03/25	INSPECTA srl - Laboratory Responsible 10/03/2025	B2MA 10/03/2025	BUREAU VERITAS ITALY WITNESSED SURVEYOR G. TESEI DATE 10/03/2025

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
VOESTALPINE GROBBLECH GMB & CO	SEE NOTE	123B00	Q012401355

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

- PO 1724000092: HEAT 958039
- PO 1724000100: HEAT 764715
  HEAT 869151
  HEAT 869177
- PO 1724000102: HEAT 868836
  HEAT 958443

INSPECTA S.R.L.	TEST REPORT *RAPPORTO DI PROVA*		ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO LAB N°1607 L
	N° 469-00250-24 Data: 10/12/2024	Rev.00	

Object: *Oggetto:*	**IMPACT TEST ON BASE MATERIAL**				Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS**	**SEE REMARKS**	
		# Informazione fornita dal cliente/ Information provided by the customer			
Customer: *Committente:* **Address:** *Indirizzo:*	**ROSETTI MARINO S.p.A.** **Via Trieste, 230 – 48122 Ravenna - ITALY**				
Final customer:. *Cliente finale:*	//				
Your delivery note n°: *Vs. DDT di consegna*	**n°** // *n°*	**Date:** *Data:* //	**MD52** *MD 52*	**118/2024**	**Date:** *Data:* **25/10/2024**
Start of activities:: *Inizio prove :*	**Date:** *Data:* **10/12/2024**	**End of activities:** *Fine prove:*			**Date:** *Data:* **10/12/2024**

PROVE RICHIESTE

☐ **TENSILE TEST**/*Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST**/*Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root /*Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST**/*Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST** / *Macrografia*		
☐ **HARDNESS TEST**/ *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST**/ *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS**/*Analisi Chimica*		
☐ **MICROEXAMINATION TEST** / *Micrografia*		
☐ **OTHER (Specify)**/*Altro/(Specificare)*		

Allegati /Attachments: NONE
NOTE/ Remarks: **NSC-CDA-N38-OSS-ENG-00059-08 SST-DES-DWG**
Informazioni aggiuntive fornite dal cliente:
Additional information provided by the customer

Specimen ID	Thickness	Base Material	Heat n°	Plate/Batch n°
446/24	35	EN 10225-2 S460MLO	764715	251670/2
447/24	45	EN 10225-1 S355MLO	958039	246168/1
448/24	45	EN 10225-1 S355MLO	763602	246553/1
449/24	45	EN 10225-2 S460MLO	764715	245889/2
452/24	85	EN 10225-2 S460MLO	869151	252760/1
453/24	50	EN 10225-2 S460MLO	868836	249026/1
457/24	60	EN 10225-2 S460MLO	869177	245953/1
458/24	60	EN 10225-2 S460MLO	958443	245949/1

Laboratory Responsible	Customer Inspector	Third part Inspector
Responsabile Laboratorio *Sig. Nicola Fini* - INSPECTA Srl - Laboratory Responsible 10/12/2024	*Ispettore del cliente* 2 Tesei 16/12/2024.	*Ispettore Terza parte* WITNESSED SURVEYOR E. TESEI DATE 10/12/2024

I risultati contenuti nel presente rapporto di prova si riferiscono unicamente al campione sottoposto a prova. Il committente si impegna a riprodurre integralmente il rapporto di prova. E' vietata ogni forma di riproduzione parziale. L'accreditamento ACCREDIA non significa approvazione del prodotto da parte dell'ente di accreditamento e del laboratorio. I risultati di prova si riferiscono al campione così come ricevuto, essendo il campionamento eseguito dal cliente. Ove indicato l'incertezza di misura è da intendersi incertezza estesa, corrispondente ad un fattore di copertura Ku= 2 equivalente ad un livello di fiducia pari a 95%. Quando emesso il Report in revisione, l'oggetto revisionato è identificabile mediante barra verticale posta sul lato sinistro e dal testo in formato corsivo sottolineato.
Inspecta declina ogni responsabilità nel riportare sul rapporto di prova informazioni fornite dal cliente.
The results in this test report refers only to the specimen that has been tested. The customer undertakes to print out/reproduce the test report. Any partial reproduction is prohibited. Accredia's accreditation does not imply the product approval neither by the accreditation body or the laboratory. The test results refer to the sample as received, since the sampling is performed by the customer. Where indicated the measurement uncertainty is to be understood expanded uncertainty corresponding to a coverage factor Ku=2 equivalent to a level of confidence of 95 %. When the Report under review is issued, the revised object can be identified by the vertical bar on the left side and by the text in italics underlined. Inspecta declines any responsibility in reporting information provided by the customer on the test report..

Headquarter: Via G.Giolitti 10 – 48123 Ravenna (RA) Italy – Phone /Fax + 39 0544 451424
Mobile +39 3515227934 - e-mail: inspectasrl@inspectasrl.com - www.inspectasrl.com - P.iva 03944480403
Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:10/12/2024
Data esecuzione prova:

performed in accordance with the standard / eseguita in conformità alla norma UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna :PP09 rev.09*

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / *coltello*	Requirement / Requisiti: Energy absorbed/ / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
446/24 BM	T	10x10x55	-50°C	V	2	145	64	183	131	/	/	/	/	/	/	/	SURFACE
447/24 BM	T	10x10x55	-60°C	V	2	344	369	360	358	/	/	/	/	/	/	/	SURFACE
447/24 BM	T	10x10x55	-60°C	V	2	396	390	395	394	/	/	/	/	/	/	/	1/2 THK
448/24 BM	T	10x10x55	-60°C	V	2	391	405	398	398	/	/	/	/	/	/	/	SURFACE
448/24 BM	T	10x10x55	-60°C	V	2	375	394	403	391	/	/	/	/	/	/	/	1/2 THK
449/24 BM	T	10x10x55	-60°C	V	2	399	420	427	415	/	/	/	/	/	/	/	SURFACE
449/24 BM	T	10x10x55	-60°C	V	2	398	419	419	412	/	/	/	/	/	/	/	1/2 THK
452/24 BM	T	10x10x55	-60°C	V	2	381	388	371	380	/	/	/	/	/	/	/	SURFACE
452/24 BM	T	10x10x55	-60°C	V	2	350	395	355	367	/	/	/	/	/	/	/	1/2 THK
453/24 BM	T	10x10x55	-60°C	V	2	312	360	371	348	/	/	/	/	/	/	/	SURFACE
453/24 BM	T	10x10x55	-60°C	V	2	385	364	366	372	/	/	/	/	/	/	/	1/2 THK
457/24 BM	T	10x10x55	-60°C	V	2	360	384	341	362	/	/	/	/	/	/	/	SURFACE
457/24 BM	T	10x10x55	-60°C	V	2	402	404	406	404	/	/	/	/	/	/	/	1/2 THK
458/24 BM	T	10x10x55	-60°C	V	2	375	334	315	341	/	/	/	/	/	/	/	SURFACE
458/24 BM	T	10x10x55	-60°C	V	2	395	396	408	400	/	/	/	/	/	/	/	1/2 THK

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:*	//
Legend *Legenda*	L= Longitudinal / Longitudinale T= Trasversal / Trasversale VWT 0/2 = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* VHT 0/2 = Impact Test on Fusion Line / *Resilienza Trasversale in linea di fusione* VHT 1/2 = Impact Test at 1mm from Fusion Line / *Resilienza trasversale a 1 mm dalla linea di fusione* VHT 2/2 = Impact Test at 2 mm from Fusion Line / *Resilienza trasversale a 2 mm dalla linea di fusione* VHT 5/2 = Impact Test at 5 mm from Fusion Line / *Resilienza trasversale a 5 mm dalla linea di fusione* WM = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* HAZ = Impact Test on Heat Affected Zone / *Resilienza Trasversale in zona termicamente alterata* BM = Impact Test on Base Metal / *Resilienza Trasversale in materiale base* FL = Fusion Line/ *Linea di fusione* FL+1 = Fusion Line + 1mm/ *Linea di fusione+1mm* FL+2 = Fusion Line + 2mm/ *Linea di fusione+2mm* FL +5= Fusion Line + 5mm/ *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio*	Laboratory Responsible *Responsabile Laboratorio*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
Dott. Ing. Alfredo Ghelleschi Laboratory Technician 10/12/2024	Sig. Nicolò Fini - INSPECTA srl - Laboratory Responsible 10/12/2024	E. Teori 10/12/2024	BUREAU VERITAS ITALY WITNESSED SURVEYOR G. TESEI DATE 10/12/2024

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400030-6

Z02 Date 21-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378657	A08 Order-No.:	4500160	A07 OrderDat.	23-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460MLO Z35
		B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000100 123B00B	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
123B00B P35 -JACKET AND PILES

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC.: L2.01 STRUCTURAL STEEL REQUIREMENTS_REV03 AND 123B00-MTO-ST-001_02

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764715	251666/2	120	35,00	3050,0	8900	1		7.579	42966	18-03-2024	1PLATCS35048
764715	251666/1	120	35,00	3050,0	8900	1		7.578	42942	18-03-2024	1PLATCS35048
764715	251668/2	120	35,00	3050,0	8900	1		7.574	42942	18-03-2024	1PLATCS35048
764715	251668/1	120	35,00	3050,0	8900	1		7.573	42966	18-03-2024	1PLATCS35048
764715	251670/1	120	35,00	3050,0	8900	1		7.597	42966	18-03-2024	1PLATCS35048
764715	251670/2	120	35,00	3050,0	8900	1		7.600	42966	18-03-2024	1PLATCS35048
764715	251672/1	120	35,00	3050,0	8900	1		7.573	42966	18-03-2024	1PLATCS35048
764715	251672/2	120	35,00	3050,0	8900	1		7.581	42966	18-03-2024	1PLATCS35048
869152	245914/1	10	95,00	2400,0	6700	1		12.255	42983	18-03-2024	1PLATCS95001
869152	245916/1	10	95,00	2400,0	6700	1		12.199	42914	15-03-2024	1PLATCS95001
		Sum				10		85.109			

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Job#:
Ref. No.
Office: Vienna
Signature

26-MAR-2024

voestalpine

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voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400033-2 K

Z02 Date 12-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378491**	A08 Order-No.:	**4500161**	A07 OrderDat.	19-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S355MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000092 123B00B	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
123B00B P35 -JACKET AND PILES

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC. L2.01 STRUCTURAL STEEL REQUIREMENTS REV03 AND OF.2023.0667-3 ROSETTI MARINO SPA

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
958039	246168/1	30	45,00	2685,0	7740	1		7.476	42746	12-03-2024	1PLATCS45032
958039	246169/1	50	45,00	2685,0	6550	1		6.314	42676	11-03-2024	1PLATCS45031
958597	247534/2	10	45,00	2158,0	7580	1		5.887	42671	11-03-2024	1PLATCS45032
958597	247534/1	10	45,00	2158,0	7580	1		5.884	42671	11-03-2024	1PLATCS45032
		Sum				4		25.561			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Springer Thomas

Z03
third party stamp

LRQA
Witnessed ☐ Monitored ☑ Reviewed ☑
Name Michael Messerer
Date
Signature
Ref. No.:
Office Vienna

15-MAR-2024

voestalpine

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www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400033-1

Z02 Date 08-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378467	A08 Order-No.:	4500161	A07 OrderDat.	19-01-2024	Date of dispatch	06-03-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S355MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000092 123B00B	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
123B00B P35 -JACKET AND PILES

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC. L2.01 STRUCTURAL STEEL REQUIREMENTS REV03 AND OF.2023.0667-3 ROSETTI MARINO SPA

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
763602	246553/1	60	45,00	2685,0	7050	1		6.791	42523	1PLATCS45031
958597	247535/2	40	45,00	2685,0	6540	1		6.326	42523	1PLATCS45032
958597	247535/1	40	45,00	2685,0	6540	1		6.330	42523	1PLATCS45032
958597	247537/1	20	45,00	2158,0	8080	1		6.268	42523	1PLATCS45032
958597	247537/2	20	45,00	2158,0	8080	1		6.270	42523	1PLATCS45032
		Sum				5		31.985		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name Michael Messerer
Signature
Date
Ref. No.
Office Vienna

13-MAR-2024

voestalpine

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voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400030-2

Z02 Date 12-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378490**	A08 Order-No.:	**4500160**	A07 OrderDat.	23-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460MLO Z35
		B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000100 123B00B	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
123B00B P35 -JACKET AND PILES

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC.: L2.01 STRUCTURAL STEEL REQUIREMENTS_REV03 AND 123B00-MTC-ST-001 02

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Dimensions Item	B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764349	245670/1	160	50,00	2000,0	10000	1		8.032	42675	11-03-2024	1PLATCS50045
764715	245885/2	140	50,00	2100,0	8900	1		7.518	42684	12-03-2024	1PLATCS50045
764715	245885/1	140	50,00	2100,0	8900	1		7.518	42684	12-03-2024	1PLATCS50045
764715	245889/2	150	45,00	3050,0	6500	1		7.149	42669	09-03-2024	1PLATCS45033
764715	245889/1	150	45,00	3050,0	6500	1		7.144	42669	09-03-2024	1PLATCS45033
764715	245891/1	150	45,00	3050,0	6500	1		7.154	42669	09-03-2024	1PLATCS45033
764715	245891/2	150	45,00	3050,0	6500	1		7.154	42669	09-03-2024	1PLATCS45033
764718	245952/1	90	55,00	2800,0	8000	1		9.901	42669	09-03-2024	1PLATCS55012
764718	245954/1	90	55,00	2800,0	8000	1		9.887	42745	12-03-2024	1PLATCS55012
764718	245956/1	90	55,00	2800,0	8000	1		9.870	42669	09-03-2024	1PLATCS55012
867619	247539/1	100	40,00	1850,0	8400	1		4.964	42742	13-03-2024	1PLATCS40052
867619	247539/2	100	40,00	1850,0	8400	1		4.965	42742	13-03-2024	1PLATCS40052
869151	245902/1	10	95,00	2400,0	6700	1		12.252	42685	10-03-2024	1PLATCS95001

Z02
Inspection representative voestalpine
Springer Thomas

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name Michael Messerer
Date
Ref. No.
Office Vienna
Signature
12-MAR-2024

voestalpine

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4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-1

Z02 Date 05-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378829	A08 Order-No.:	4500333	A07 OrderDat.	22-02-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1724000385 123B00B

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008 00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
869151	252760/1	10	85,00	2500,0	7000	1		11.930	43614	05-04-2024	1PLATCS85009
869498	253315/1	60	50,00	2600,0	12000	1		12.479	43614	05-04-2024	1PLATCS50045
869736	253056/1	30	70,00	2600,0	7500	1		10.974	43561	03-04-2024	1PLATCS70017
958686	254566/1	60	50,00	2600,0	12000	1		12.599	43614	05-04-2024	1PLATCS50045
		Sum				4		47.982			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
Witnessed ☐ Monitored ☑ Reviewed
Name Michael Measure
Signature
Ref. No.
Office Vienna

10-APR-2024

voestalpine

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400041-1

Z02 Date 18-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378610**	A08 Order-No.:	**4500236**	A07 OrderDat.	29-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460MLO
		B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000102 123B00C	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
GODEWIND 4

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED. // SPEC.: L2.01 STRUCTURAL STEEL REQUIREMENTS REV03 AND 123B00-MTO-ST-004 00 (Q35 PLATES)

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
868836	249026/1	110	50,00	3000,0	8000	1		9.647	42944	18-03-2024	1PLATCS50045
868836	249027/1	110	50,00	3000,0	8000	1		9.647	42944	18-03-2024	1PLATCS50045
869177	250978/1	20	60,00	2300,0	11000	1		12.171	42975	19-03-2024	1PLATCS60034
		Sum				3		31.465			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Mosbeck
Date:
Ref. No.:
Office: Vienna
Signature
LRQA

26-MAR-2024

voestalpine

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400035-1

Z02 Date 13-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378488	A08 Order-No.:	4500150	A07 OrderDat.	22-01-2024

400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000102 123B00C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	TECADE SA CALLE HERRERO ((PG IND LA CHAPA)) 1 E-41750 LOS MOLARES	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
GODEWIND 4

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC.: L2.01 STRUCTURAL STEEL REQUIREMENTS REV03 AND 123B00-MTO-ST-004 00 (Q35 PLATES)

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Dimensions B09 Item	B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
869149	247745/1	60	85,00	2850,0	8000	1		15.550	42708	12-03-2024	1PLATCS85009
869151	245545/1	60	85,00	2850,0	8000	1		15.511	42708	12-03-2024	1PLATCS85009
869177	245602/1	90	60,00	2650,0	12550	1		16.006	42707	12-03-2024	1PLATCS60034
869177	245603/1	90	60,00	2650,0	12550	1		15.979	42665	09-03-2024	1PLATCS60034
869177	245604/1	90	60,00	2650,0	12550	1		16.006	42708	12-03-2024	1PLATCS60034
869177	245605/1	90	60,00	2650,0	12550	1		16.000	42665	09-03-2024	1PLATCS60034
869177	245953/1	30	60,00	2400,0	12000	1		13.857	42666	09-03-2024	1PLATCS60034
958396	245598/1	100	75,00	2550,0	12550	1		19.283	42665	09-03-2024	1PLATCS75013
958443	245947/1	40	60,00	2850,0	12000	1		16.451	42707	12-03-2024	1PLATCS60034
958443	245949/1	40	60,00	2850,0	12000	1		16.451	42707	12-03-2024	1PLATCS60034
958443	245951/1	40	60,00	2850,0	12000	1		16.390	42708	12-03-2024	1PLATCS60034
958443	245957/1	40	60,00	2850,0	12000	1		16.413	42656	09-03-2024	1PLATCS60034

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
LRQA
Name: Michael Messerer
Date:
Ref. No.
Office: Vienna
Signature

20-MAR-2024

voestalpine

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400035-1

Z02 Date 13-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378488**	A08 Order-No.:	**4500150**	A07 OrderDat.	22-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1724000102 123B00C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	TECADE SA CALLE HERRERO ((PG IND LA CHAPA)) 1 E-41750 LOS MOLARES	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
GODEWIND 4

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED // SPEC.: L2.01 STRUCTURAL STEEL REQUIREMENTS REV03 AND 123B00-MTO-ST-004 00 (Q35 PLATES)

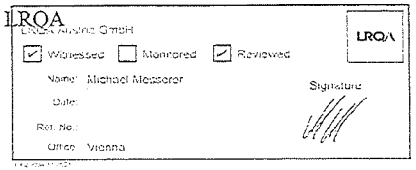
D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Dimensions Item	B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
869149	247745/1	60	85,00	2850,0	8000	1		15.550	42708	12-03-2024	1PLATCS85009
869151	245545/1	60	85,00	2850,0	8000	1		15.511	42708	12-03-2024	1PLATCS85009
869177	245602/1	90	60,00	2650,0	12550	1		16.006	42707	12-03-2024	1PLATCS60034
869177	245603/1	90	60,00	2650,0	12550	1		15.979	42665	09-03-2024	1PLATCS60034
869177	245604/1	90	60,00	2650,0	12550	1		16.006	42708	12-03-2024	1PLATCS60034
869177	245605/1	90	60,00	2650,0	12550	1		16.000	42665	09-03-2024	1PLATCS60034
869177	245953/1	30	60,00	2400,0	12000	1		13.857	42666	09-03-2024	1PLATCS60034
958396	245598/1	100	75,00	2550,0	12550	1		19.283	42665	09-03-2024	1PLATCS75013
958443	245947/1	40	60,00	2850,0	12000	1		16.451	42707	12-03-2024	1PLATCS60034
958443	245949/1	40	60,00	2850,0	12000	1		16.451	42707	12-03-2024	1PLATCS60034
958443	245951/1	40	60,00	2850,0	12000	1		16.390	42708	12-03-2024	1PLATCS60034
958443	245957/1	40	60,00	2850,0	12000	1		16.413	42666	09-03-2024	1PLATCS60034

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp



20-MAR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000385	123B00B	Q012400221

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

12.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400058 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500333**

Date: **05-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **30-03-2024**

final: **02-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000385 123B00B**

Description:

4 piece(s) of steel plate(s) **47982 kg** , as per attached inspection Certificate no.: **A0378829**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400058-1

Z02 Date 05-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378829**	**A08 Order-No.:**	**4500333**	**A07 OrderDat.**	22-02-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000385 123B00B

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
JACKET P35

B03 - Supplementary requirements
MATERIAL ACC. TO EN10225 (2019) OPTIONS 11,12,15 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B. SPECIFICATION L2.01 .RESPECTED.
MATERIAL ACC. TO 123B00-MTO-ST-008_00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
869151	252760/1	10	85,00	2500,0	7000	1		11.930	43614	05-04-2024	1PLATCS85009
869498	253315/1	60	50,00	2600,0	12000	1		12.479	43614	05-04-2024	1PLATCS50045
869736	253056/1	30	70,00	2600,0	7500	1		10.974	43561	03-04-2024	1PLATCS70017
958686	254566/1	60	50,00	2600,0	12000	1		12.599	43614	05-04-2024	1PLATCS50045
	Sum					**4**		**47.982**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A2 - Weld-repair only after approval of welding docu. by customer
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.43
869151	.054	.170	1.510	.004	.0008	.031	.186	.520	.124	.018	.005	.026	.012	.0053	.0002	.0020	.0015	.0020	.0020	.0020	.40
869498	.029	.341	1.630	.005	.0008	.040	.184	.170	.006	.157	.004	.034	.012	.0058	.0003	.0020	.0021	.0020	.0020	.0020	.36
869736	.056	.183	1.540	.005	.0010	.029	.172	.520	.121	.011	.004	.027	.012	.0049	.0002	.0020	.0010	.0020	.0020	.0020	.41
958686	.031	.317	1.620	.005	.0007	.035	.164	.170	.006	.158	.004	.038	.013	.0054	.0002	.0020	.0019	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
869151	.16	.031	.043	5.85
869498	.14	.038	.050	6.90
869736	.17	.031	.043	5.92
958686	.14	.042	.055	6.48

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						400	500		17.0	
Set values	<=							675			93.00
869151	245545	Ø	10.03	F	V	T	416	556	A5	26.5	74.74
	>=						405	500		17.0	
Set values	<=							675			93.00
869736	252762	Ø	9.97	F	V	T	473	607	A5	24.9	77.94
	>=						415	500		17.0	
Set values	<=							675			93.00
869498	253315	Ø	9.99	F	V	T	497	591	A5	26.4	84.04
958686	254567	Ø	9.95	F	V	T	510	598	A5	25.9	85.35

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
869151	245545	CV 10x10	F	O	T	-40	352	342	357	350	
	245545	CV 10x10	F	K	T	-40	350	346	339	345	
869498	253315	CV 10x10	F	O	T	-40	388	385	380	385	
	253315	CV 10x10	F	K	T	-40	403	400	411	405	
869736	252762	CV 10x10	F	O	T	-40	300	296	321	306	
	252762	CV 10x10	F	K	T	-40	264	83	81	142	
958686	254567	CV 10x10	F	O	T	-40	353	360	351	355	
	254567	CV 10x10	F	K	T	-40	371	368	365	368	
>= Set values <=						-40	29	29	29	46	
869151	245545	CV 10x10	F	ZB2	T	-40	313	308	313	311	strain aged 5%, 60 min. at 250°C
869498	253315	CV 10x10	F	ZB2	T	-40	36	303	313	217	strain aged 5%, 60 min. at 250°C
869736	252762	CV 10x10	F	ZB2	T	-40	53	272	30	118	strain aged 5%, 60 min. at 250°C

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
Set values >=						-40	29	29	29	46	
958686	254567	CV 10x10	F	ZB2	T	-40	338	327	335	333	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						400	400	400	25	25	25	35
Set values <=												
869151	245902	Ø	9.95	F	S	560	561	561	78	79	79	79
869498	253315	Ø	9.95	F	S	569	571	572	79	82	81	81
869736	253308	Ø	9.99	F	S	582	583	585	66	61	68	65
958686	254567	Ø	9.94	F	S	566	568	570	84	83	81	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869151	246513	.057	.166	1.510	.004	.0008	.031	.184	.520	.123	.018	.005	.025	.012	.0050	.0002	.0020	.0013	.0020	.0020
869498	251487	.033	.347	1.620	.005	.0008	.040	.181	.170	.006	.154	.003	.034	.012	.0057	.0002	.0020	.0023	.0020	.0020
869736	252052	.055	.186	1.560	.005	.0007	.029	.169	.520	.121	.011	.004	.028	.012	.0050	.0002	.0020	.0010	.0020	.0020
958686	254567	.033	.324	1.600	.005	.0009	.036	.172	.170	.007	.157	.004	.037	.013	.0060	.0002	.0020	.0021	.0020	.0020

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.43	.22	.120	.130	
869151	246513	.0020	.0020	.41	.17	.030	.042	6.20
869498	251487	.0020	.0020	.36	.15	.037	.049	7.02
869736	252052	.0020	.0020	.41	.17	.032	.044	5.80
958686	254567	.0020	.0020	.36	.15	.041	.054	6.00

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

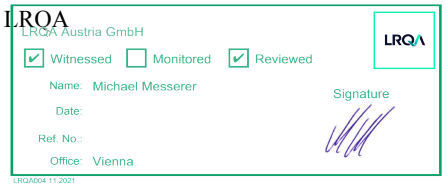
C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA



10-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S2/Body, Grid 100 mm, EN 10160 class E3/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

10-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
METINVEST TRAMETAL SPA	1724000386	123B00B	Q012400395

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 10.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A02

CERTIFICATO DI CONTROLLO 3.2 / INSPECTION CERTIFICATE 3.2 - EN 10204:2004

A04/A05

METINVEST

METINVEST TRAMETAL SPA

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N° = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A01

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

A06 Cliente / Customer

ROSETTI MARINO SPA
Via trieste 230
48122 RAVENNA 48122 IT
RA ITALIA

A03 N° Certificato / Certificate no.	Z02 Data / Date
52609	07/06/2024
A08 N° Ordine Trametal / Works order	A07 N° Ordine cliente / Customer's order
32401248	1724000386
DDT	del / date
Pratica / File no.	2024/TS/611/01
del / date	16/05/2024

B06 Marcatura di prodotto / Marking of the product

LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355K2+N
Normativa / Specification	EN10025-2:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI [mm] DIMENSIONS	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 STEELMAKING PROCESS PROCESSO ELAB. (A)	B04 DELIVERY CONDITION STATO FORNITURA LAMIERA (B)	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE HEAT TREATMENT (C)	C00 CAMPIONE PWHT SAMPLE	B05 PWHT BEGINNING TEMPERATURE TEMPERATURA INIZIO °C	HEATING RATE VELOCITA' RISCALDO C/h	TEMPERATURE TREATMENT TEMPERATURA TRATTAMENTO °C	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	END TEMPERATURE TEMPERATURA FINE °C	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURE TEMPERATURA (Q) °C	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURE TEMPERATURA (T) °C	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
1	LNAA840502A	1946053	30.00X2500X12000	7,07	792762	BO	N	W2371																
	Total	1		7,07																				

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
Ordine Min 1																					
Ordine Max 1																				0,43	
S355K2+N Min 0.00 - 30.00																					
S355K2+N Max 0.00 - 30.00	0,20	1,60	0,55	0,025	0,025	0,550														0,45	
LNAA84	0,17	1,41	0,21	0,015	0,002	0,000	0,010	0,010	<0.005	0,034	0,001	0,023	0,002	<0.005	0,0000	0,0054	0,0004	0,0000	0,41	0,41	0,25

C71/C92 COMPOSIZIONE CHIMICA DI PRODOTTO / PRODUCT CHEMICAL ANALYSIS

C00	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
CAMPIONE SAMPLE	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
W2371	0,17	1,42	0,23	0,018	0,004	0,000	0,010	0,010	0,002	0,036	0,001	0,025	0,004	0,002	0,0000	0,0055	0,0004	0,0000	0,41	0,41	0,25

	PROVA DI TRAZIONE TENSILE TEST											PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	ORIENTATION DIREZIONE (3)	TEMPERATURA [°C] TEST TEMPERATURE	ReH [Mpa] YIELD STRENGTH	Rm [Mpa] TENSILE STRENGTH	ReH/Rm	A% ELONGATION	Rp 0,2 [Mpa] PROOF/YIELD STRENGTH	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA [mm] WIDTH	ORIENTATION DIREZIONE (3)	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDREL MANDRINO [mm]	ANGOLO [°] ANGLE	ESITO (5) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
ORDINE Min 1														-20			34										
S355K2+N Min 16.10 - 40.00					20	345	470		20,0																		
S355K2+N Max 16.10 - 40.00					20		630																				
S355K2+N Min 6.00 - 999.00													L	-20			40										
W2371	30,00	2	P	T	20	391	515	0,76	36,7		P	10,00	L	-40	P	189 185 205	193										
W2371	30,00	2										10,00	T	-40	P	125 184 178	162										
I0022	30,00	2										10,00	T	-40	P	162 142 158	154										

C10
UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

D02-D50 CONTROLLO ULTRASONORO / ULTRASONIC EXAMINATION

D02	D03	D04	D05	D06	D07
APPARECCHIATURA EQUIPMENT	N° SERIE SERIAL NO	CONDIZIONI SUPERFICIALI SURFACE CONDITIONS	ACCOPPIANTE COUPLANT	MODALITÀ OPERATIVE PROCEDURE	TARATURA CALIBRATION
GILARDONI RDG2000	RDG2000-053188003	GREZZO DI LAMINAZIONE AS ROLLED	ACQUA WATER	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION

B07 LAMIERA PLATE	D08 SONDE PROBE	D09 DIAMETRO DIAMETER MM	D10 FREQUENZA FREQUENCE MHZ	D11 ANGOLO Angle °	D12 NORMA DI RIFERIMENTO STANDARD SPECIFICATION	D13 CLASSE DI ACCETTABILITÀ ACCEPTANCE SPECIFICATIONS	D14 ESITO RESULT	D15 INDICAZIONI INDICATIONS	D16 RETICOLO RETICLE	D17 BORDI EDGES
LNAA840502A	BDD20/2	mm 20	2 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50

D18 NOTE REMARKS	D19 ENTE ISPETTIVO INSPECTOR	D20 FIRMA SIGNATURE
	RINA A. Vitiello RINA Services S.p.A.	METINVEST TRAMETAL S.p.a. F. Andrian III Liv. EN ISO 9712

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
1		EN 10029 CL.B	-0+100 MM	-0+200 MM	EN 10163/2 CL A2	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

STRAIN-AGED SAMPLE N° I0022 (W2371) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STEEL VACUUM DEGASSED

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE	METINVEST TRAMETAL S.p.a. F. Andrian CQ Manager

RINA A. Vitiello RINA Services S.p.A.

METINVEST
METINVEST TRAMETAL SPA

Metinvest Trametal spa
Head Office:
Via XII Ottobre 1, 5° piano
16121 Genova - Italy
Tel. +39 010 5762911
Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2NZ15	EN10025-2:2019
S355JR+AR	EN10025-2:2019
S355JR+N	EN10025-2:2019
S355J0+AR	EN10025-2:2019
S355J0+N	EN10025-2:2019
S355J2+N	EN10025-2:2019
S355K2+N	EN10025-2:2019
S355J2NZ25	EN10025-2:2019
S355J2NZ35	EN10025-2:2019
S355K2NZ15	EN10025-2:2019
S355K2NZ25	EN10025-2:2019
S355K2NZ35	EN10025-2:2019
S355J0C+N	EN10025-2:2019
S355J2C+N	EN10025-2:2019
S355K2C+N	EN10025-2:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355K2+N	LNAA840502A	1946053	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

The products specified in this document are intended to be used in welded structures, bolted and riveted.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	Prestazione / Performance	Norma Armonizzata / Harmonized specification
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

07/06/2024

Roberto Re

Managing Director
Metinvest Trametal spa
Metinvest Group

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
METINVEST TRAMETAL SPA	1724000386	123B00B	Q012400402

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani — 11.06.2024

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

CERTIFICATO DI CONTROLLO 3.2 / INSPECTION CERTIFICATE 3.2 - EN 10204:2004

A04/A05

METINVEST
METINVEST TRAMETAL SPA

A01

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N* = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A06 Cliente / Customer

ROSETTI MARINO SPA
Via trieste 230
48122 RAVENNA 48122 IT
RA ITALIA

A03 N° Certificato / Certificate no.	A02 Data / Date
52479	16/05/2024
A08 N° Ordine Trametal / Works order	A07 N° Ordine cliente / Customer's order
32401943	1724000386
DDT	del / date
Pratica / File no.	2024/TS/532/01
del / date	30/04/2024

B06 Marcatura di prodotto / Marking of the product
LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355K2+N Z35
Normativa / Specification	EN10025-2:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 STEELMAKING PROCESS	B04 PROCESSO ELAB. (A) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT BEGINNING TEMPERATURE °C	TEMPERATURA INIZIO	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURE TREATMENT TEMPERATURA TRATTAMENTO °C	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	END TEMPERATURE TEMPERATURA FINE °C	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURE TEMPERATURA (Q) °C	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURE TEMPERATURA (T) °C	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
5	6NAC830402A	1944980	30.00X3000X11000	7,77	792157	BO	N	W2183																	
5	6NAC830403A	1944965	30.00X3000X11000	7,77	792157	BO	N	[W2183]																	
5	6NAC830404A	1944979	30.00X3000X11000	7,77	792157	BO	N	[W2183]																	
	Total	3		23,31																					

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
Ordine Min 5																					
Ordine Max 5					0,007															0,43	
S355K2+N Min 0.00 - 30.00																					
S355K2+N Max 0.00 - 30.00	0,20	1,60	0,55	0,025	0,025	0,550														0,45	
6NAC83	0,16	1,47	0,17	0,015	0,004	0,010	0,020	0,040	<0.005	0,034	0,001	0,030	0,001	<0.005	0,0000	0,0035	0,0002	0,0003	0,41	0,42	0,24

C71/C92 COMPOSIZIONE CHIMICA DI PRODOTTO / PRODUCT CHEMICAL ANALYSIS

C00	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
CAMPIONE SAMPLE	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
W2183	0,16	1,51	0,19	0,018	0,006	0,050	0,020	0,040	0,002	0,035	0,005	0,034	0,002	0,003	0,0000	0,0043	0,0002	0,0000	0,41	0,43	0,25

			PROVA DI TRAZIONE TENSILE TEST									PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE LOCATION (1)	POSIZIONE LOCATION (2)	DIREZIONE ORIENTATION (3)	TEMPERATURA TEST TEMPERATURE [°C]	ReH [Mpa] YIELD STRENGTH	Rm [Mpa] TENSILE STRENGTH	ReH/Rm	A% ELONGATION	Rp 0.2 [Mpa] PROOF/YIELD STRENGTH	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA [mm] WIDTH	DIREZIONE ORIENTATION (3)	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE ORIENTATION (3)	MANDRINO [mm] MANDREL	ANGOLO [°] ANGLE	ESITO (5) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
ORDINE Min 5														-40			40										
S355K2+N Min 16.10 - 40.00					20	345	470		20,0																		
S355K2+N Max 16.10 - 40.00					20		630																				
S355K2+N Min 6.00 - 999.00													L	-20			40				✓						
W2183	30,00	2	P	T	20	415	527	0,79	35,4		P	10,00	L	-40	P	177 176 185	179									78 72 75	75
W2183	30,00	2										10,00	T	-40	P	142 153 145	147										
I0014	30,00	2										10,00	T	-40	P	147 145 135	142										

C10

UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016 / UNI EN 10164

D02-D50 CONTROLLO ULTRASONORO / ULTRASONIC EXAMINATION

D02	D03	D04	D05	D06	D07
APPARECCHIATURA EQUIPMENT	N° SERIE SERIAL NO	CONDIZIONI SUPERFICIALI SURFACE CONDITIONS	ACCOPPIANTE COUPLANT	MODALITÀ OPERATIVE PROCEDURE	TARATURA CALIBRATION
GILARDONI RDG2000	RDG2000-053188003	GREZZO DI LAMINAZIONE AS ROLLED	ACQUA WATER	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION

B07 LAMIERA PLATE	D08 SONDE PROBE	D09 DIAMETRO DIAMETER MM	D10 FREQUENZA FREQUENCE MHZ	D11 ANGOLO Angle °	D12 NORMA DI RIFERIMENTO STANDARD SPECIFICATION	D13 CLASSE DI ACCETTABILITÀ ACCEPTANCE SPECIFICATIONS	D14 ESITO RESULT	D15 INDICAZIONI INDICATIONS	D16 RETICOLO RETICLE	D17 BORDI EDGES
6NAC830402A	BDD20/2	mm 20	2 MHz	0	EN 10160 CL. S2 E3		OK	NO INDICATIONS FOUND	mm 100x100	50
6NAC830403A	BDD20/2	mm 20	2 MHz	0	EN 10160 CL. S2 E3		OK	NO INDICATIONS FOUND	mm 100x100	50
6NAC830404A	BDD20/2	mm 20	2 MHz	0	EN 10160 CL. S2 E3		OK	NO INDICATIONS FOUND	mm 100x100	50

D18 NOTE REMARKS	D19 ENTE ISPETTIVO INSPECTOR	D20 FIRMA SIGNATURE
		METINVEST TRAMETAL S.p.a. F. Andrian III Liv. EN ISO 9712

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
5		EN 10029 CL.B	-0+100 MM	-0+200 MM	EN 10163/2 CL A2	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

STRAIN-AGED SAMPLE N° I0014 (W2183) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STEEL VACUUM DEGASSED

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE RINA Pierobon Flavio Marine Surveyor RINA Services S.p.A.	METINVEST TRAMETAL S.p.a. F. Andrian CQ Manager

METINVEST
METINVEST TRAMETAL SPA

Metinvest Trametal spa
Head Office:
Via XII Ottobre 1, 5° piano
16121 Genova - Italy
Tel. +39 010 5762911
Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2NZ15	EN10025-2:2019
S355JR+AR	EN10025-2:2019
S355JR+N	EN10025-2:2019
S355J0+AR	EN10025-2:2019
S355J0+N	EN10025-2:2019
S355J2+N	EN10025-2:2019
S355K2+N	EN10025-2:2019
S355J2NZ25	EN10025-2:2019
S355J2NZ35	EN10025-2:2019
S355K2NZ15	EN10025-2:2019
S355K2NZ25	EN10025-2:2019
S355K2NZ35	EN10025-2:2019
S355J0C+N	EN10025-2:2019
S355J2C+N	EN10025-2:2019
S355K2C+N	EN10025-2:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355K2+N	6NAC830402A	1944980	EN10025-1:2004
Lamiera/ Plate	S355K2+N	6NAC830403A	1944965	EN10025-1:2004
Lamiera/ Plate	S355K2+N	6NAC830404A	1944979	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document are intended to be used in welded structures, bolted and riveted.

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	Prestazione / Performance	Norma Armonizzata / Harmonized specification
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

16/05/2024

Roberto Re

Managing Director
Metinvest Trametal spa
Metinvest Group

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
METINVEST TRAMETAL SPA	1724000386	123B00B	Q012400384

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A02

CERTIFICATO DI CONTROLLO 3.2 / INSPECTION CERTIFICATE 3.2 - EN 10204:2004

A04/A05

METINVEST
METINVEST TRAMETAL SPA

A01

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N° = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A06 Cliente / Customer

ROSETTI MARINO SPA
Via trieste 230
48122 RAVENNA 48122 IT
RA ITALIA

A07 N° Certificato / Certificate no.	Z02 Data / Date
52590	30/05/2024
A08 N° Ordine Trametal / Works order	A07 N° Ordine cliente / Customer's order
32401248	1724000386
DDT	del / date
Pratica / File no.	2024/TS/611/01
del / date	07/05/2024

B06 Marcatura di prodotto / Marking of the product
LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355K2+N
Normativa / Specification	EN10025-2:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI [mm] DIMENSIONS	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 STEELMAKING PROCESS PROCESSO ELAB. (A)	B04 DELIVERY CONDITION STATO FORNITURA LAMIERA (B)	C00 CAMPIONE SAMPLE	B05 HEAT TREATMENT TRATT. CAMPIONE (C)	C00 SAMPLE CAMPIONE PWHT	B05 PWHT BEGINNING TEMPERATURE TEMPERATURA INIZIO °C	HEATING RATE VELOCITA' RISCALDO C/h	TEMPERATURE TREATMENT TEMPERATURA TRATTAMENTO °C	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	END TEMPERATURE TEMPERATURA FINE °C	N° CICLI / CYCLES	C00 SAMPLE CAMPIONE Q+T	B05 Q+T TEMPERATURE (Q) °C TEMPERATURA	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURE (T) °C TEMPERATURA	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
2	RTAA490203A	1945982	25.00X2500X12000	5,89	792664	BO	N	W2369																	
3	RTAA630504A	1945738	20.00X2500X12000	4,71	792645	BO	N	[W2366]																	
3	RTAA630801A	1945597	20.00X2500X12000	4,71	792645	BO	N	W2366																	
3	RTAA630801B	1945597	20.00X2500X12000	4,71	792645	BO	N	W2366																	
4	RTAA610702A	1947439	15.00X2800X12000	3,96	792675	BO	N	W2370																	
4	RTAA610702B	1947439	15.00X2800X12000	3,96	792675	BO	N	W2370																	
4	RTAA620801A	1946302	15.00X2800X12000	3,96	792655	BO	N	W2368																	
4	RTAA620801B	1946302	15.00X2800X12000	3,96	792655	BO	N	W2368																	
4	RTAA630701A	1946257	15.00X2800X12000	3,96	792648	BO	N	W2367																	
4	RTAA630701B	1946257	15.00X2800X12000	3,96	792648	BO	N	W2367																	
4	RTAA630702A	1945507	15.00X2800X12000	3,96	792648	BO	N	[W2367]																	
4	RTAA630702B	1945507	15.00X2800X12000	3,96	792648	BO	N	[W2367]																	
	Total	12		51,70																					

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
Ordine Min 2																					
Ordine Max 2																				0,43	
Ordine Min 3																					
Ordine Max 3																				0,43	
Ordine Min 4																					
Ordine Max 4																				0,43	

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
S355K2+N Min 0.00 - 30.00																					
S355K2+N Max 0.00 - 30.00	0,20	1,60	0,55	0,025	0,025	0,550														0,45	
RTAA49	0,17	1,50	0,24	0,020	0,006	0,010	0,010	0,020	<0.005	0,028	0,002	0,001	0,002	<0.005	0,0000	0,0073	0,0006	0,0003	0,42	0,43	0,26
RTAA61	0,16	1,46	0,22	0,014	0,005	0,000	0,010	0,020	<0.005	0,024	<0.005	<0.010	0,001	<0.005	0,0000	0,0065	0,0004	0,0003	0,40	0,41	0,24
RTAA62	0,17	1,46	0,27	0,016	0,006	0,010	0,010	0,020	<0.005	0,033	<0.005	<0.010	0,001	<0.005	0,0000	0,0063	0,0004	0,0003	0,41	0,42	0,26
RTAA63	0,16	1,46	0,25	0,018	0,006	0,010	0,010	0,020	<0.005	0,033	<0.005	<0.010	0,001	<0.005	0,0000	0,0061	0,0004	0,0003	0,40	0,41	0,25

C71/C92 COMPOSIZIONE CHIMICA DI PRODOTTO / PRODUCT CHEMICAL ANALYSIS

C00	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
CAMPIONE SAMPLE	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
W2366	0,16	1,46	0,28	0,022	0,007	0,020	0,010	0,020	0,003	0,033	0,003	0,001	0,002	0,001	0,0000	0,0063	0,0004	0,0003	0,40	0,41	0,25
W2368	0,17	1,47	0,31	0,020	0,006	0,040	0,010	0,020	0,001	0,037	0,002	0,005	0,002	0,002	0,0000	0,0073	0,0000	0,0000	0,42	0,42	0,26
W2369	0,17	1,50	0,28	0,020	0,006	0,030	0,010	0,020	0,002	0,029	0,003	0,004	0,004	0,001	0,0000	0,0075	0,0000	0,0003	0,42	0,43	0,26
W2370	0,16	1,47	0,26	0,018	0,005	0,000	0,010	0,020	0,001	0,028	0,002	0,005	0,002	0,002	0,0000	0,0075	0,0000	0,0000	0,41	0,41	0,24

			PROVA DI TRAZIONE TENSILE TEST									PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE LOCATION (1)	POSIZIONE LOCATION (2)	ORIENTATION (3)	TEMPERATURA TEST TEMPERATURE [°C]	YIELD STRENGTH ReH [Mpa]	TENSILE STRENGTH Rm [Mpa]	ReH/Rm	ELONGATION A%	PROOF/YIELD STRENGTH Rp 0.2 [Mpa]	SHAPE OF TEST PIECE FORMA PROVINO (4)	LARGHEZZA WIDTH [mm]	ORIENTATION (3)	TEMPERATURA TEST TEMPERATURE [°C]	POSIZIONE LOCATION (2)	SINGOLI VALORI INDIVIDUAL VALUES [J]	MEDIA MEAN VALUE [J]	ORIENTATION (3)	MANDREL MANDRINO [mm]	ANGLE ANGOLO [°]	RESULT ESITO (5)	POSIZIONE LOCATION (2)	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
ORDINE Min 2					-20									-20			34										
ORDINE Min 3					-20									-20			34										
ORDINE Min 4					-20									-20			34										
S355K2+N Min 0.00 - 16.00					20	355	470		20,0																		
S355K2+N Max 0.00 - 16.00					20		630																				
S355K2+N Min 16.10 - 40.00					20	345	470		20,0																		
S355K2+N Max 16.10 - 40.00					20		630																				
S355K2+N Min 6.00 - 999.00													L	-20			40										
W2366	20,00	2	P	T	20	385	527	0,73	36,7		P	10,00	L	-40	P	178 224 182	195										
W2366	20,00	2										10,00	T	-40	P	141 140 131	137										
W2367	15,00	2	P	T	20	400	520	0,77	40,8		P	10,00	L	-40	P	227 232 187	215										
W2368	15,00	2	P	T	20	403	515	0,78	37,5		P	10,00	L	-40	P	203 220 231	218										
W2368	15,00	2										10,00	T	-40	P	222 217 226	222										
W2369	25,00	2	P	T	20	398	531	0,75	37,9		P	10,00	L	-40	P	175 183 173	177										
W2369	25,00	2										10,00	T	-40	P	153 216 142	170										
I0018	20,00	2										10,00	T	-40	P	98 107 128	111										
I0019	15,00	2										10,00	T	-40	P	183 174 174	177										
I0020	25,00	2										10,00	T	-40	P	81 133 145	120										
W2370	15,00	2	P	T	20	418	529	0,79	31,2		P	10,00	L	-40	P	218 174 218	203										
W2370	15,00	2										10,00	T	-40	P	110 100 102	104										
I0021	15,00	2										10,00	T	-40	P	71 46 52	56										

C10
UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

D02-D50 CONTROLLO ULTRASONORO / ULTRASONIC EXAMINATION

D02	D03	D04	D05	D06	D07
APPARECCHIATURA EQUIPMENT	N° SERIE SERIAL NO	CONDIZIONI SUPERFICIALI SURFACE CONDITIONS	ACCOPPIANTE COUPLANT	MODALITÀ OPERATIVE PROCEDURE	TARATURA CALIBRATION
GILARDONI RDG2000	RDG2000-053188003	GREZZO DI LAMINAZIONE AS ROLLED	ACQUA WATER	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION	IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION

B07 LAMIERA PLATE	D08 SONDE PROBE	D09 DIAMETRO DIAMETER MM	D10 FREQUENZA FREQUENCE MHZ	D11 ANGOLO Angle °	D12 NORMA DI RIFERIMENTO STANDARD SPECIFICATION	D13 CLASSE DI ACCETTABILITÀ ACCEPTANCE SPECIFICATIONS	D14 ESITO RESULT	D15 INDICAZIONI INDICATIONS	D16 RETICOLO RETICLE	D17 BORDI EDGES
RTAA630504A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630801A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630801B	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630701A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630701B	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630702A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA630702B	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA620801A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA620801B	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA490203A	BDD20/2	mm 20	2 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA610702A	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50
RTAA610702B	BDD20/4	mm 20	4 MHz	0	EN 10160 CL. S1 E2		OK	NO INDICATIONS FOUND	mm 200x200	50

D18	D19	D20
NOTE REMARKS	ENTE ISPETTIVO INSPECTOR	FIRMA SIGNATURE
	RINA Pierobon Flavio Marine Surveyor RINA Services S.p.A.	METINVEST TRAMETAL S.p.a. F. Andrian III Liv. EN ISO 9712

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
2		EN 10029 CL.B	-0+100 MM	-0+200 MM	EN 10163/2 CL A2	EN 10029 CL. N
3		EN 10029 CL.B	-0+100 MM	-0+200 MM	EN 10163/2 CL A2	EN 10029 CL. N
4		EN 10029 CL.B	-0+100 MM	-0+200 MM	EN 10163/2 CL A2	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

STRAIN-AGED SAMPLE N° I0018 (W2366) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STRAIN-AGED SAMPLE N° I0019 (W2368) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STRAIN-AGED SAMPLE N° I0020 (W2369) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STRAIN-AGED SAMPLE N° I0021 (W2370) : PLASTICALLY STRAINED 5,0 % AND THEN AGED FOR 1h AT 250°C

STEEL VACUUM DEGASSED

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE: RINA Pierobon Flavio Marine Surveyor RINA Services S.p.A.	METINVEST TRAMETAL S.p.a. F. Andrian CQ Manager

METINVEST
METINVEST TRAMETAL SPA

Metinvest Trametal spa
Head Office:
Via XII Ottobre 1, 5° piano
16121 Genova - Italy
Tel. +39 010 5762911
Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2NZ15	EN10025-2:2019
S355JR+AR	EN10025-2:2019
S355JR+N	EN10025-2:2019
S355J0+AR	EN10025-2:2019
S355J0+N	EN10025-2:2019
S355J2+N	EN10025-2:2019
S355K2+N	EN10025-2:2019
S355J2NZ25	EN10025-2:2019
S355J2NZ35	EN10025-2:2019
S355K2NZ15	EN10025-2:2019
S355K2NZ25	EN10025-2:2019
S355K2NZ35	EN10025-2:2019
S355J0C+N	EN10025-2:2019
S355J2C+N	EN10025-2:2019
S355K2C+N	EN10025-2:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355K2+N	RTAA490203A	1945982	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA610702A	1947439	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA610702B	1947439	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA620801A	1946302	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA620801B	1946302	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630504A	1945738	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630701A	1946257	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630701B	1946257	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630702A	1945507	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630702B	1945507	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630801A	1945597	EN10025-1:2004
Lamiera/ Plate	S355K2+N	RTAA630801B	1945597	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

The products specified in this document are intended to be used in welded structures, bolted and riveted.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	**Prestazione / Performance**	**Norma Armonizzata / Harmonized specification**
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

30/05/2024

Roberto Re

Managing Director
Metinvest Trametal spa
Metinvest Group

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
WAREHOUSE	1724000419	124A40A	Q012401420

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emilia 10.04.2025

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 26/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2004 type 3.2
/nr normy/

(A10+A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** TAL
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** ITALY
Adresse-Address-Versandadreesse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF240155 MATERIAL DELIVERED ON BEHALF OF TAL-YOUR PO NBR 1724000419 122A70 (TAL REF 324000510)	H2400250/2/1 136800

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Piéces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes. Made in acc. to EN 10210-1/06/ EN 10225-3:2019. Dimensions acc. to EN10210-2. Surface grinded or shot blasted. Normalized 900°C/42'. Pipes ultrasonic testing. Raw material and end product of Polish origin. CN code: 7304 39 83 20	(B09) 406,4 x 21,44 mm 6,5 - 10 m	(B02) S355J2H S355NLHHO	(B07) 899081	(B08) 3	(B15) 19,62	(B13) 3960

UKCA
0879 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie,
ul. Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR–EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCE/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie,
ul. Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0888
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu	Mo	V	Al
(B07) 899081	0,15	1,24	0,21	0,011	0,003	0,05	0,10	0,19	0,02	0,05	0,026
	N	Ti	Nb	B	Ceq						
	0,009	0,001	0,000	0,0002	0,40						

Approved by QUALITY2 on 29/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Re MPa min 355	Rm MPa 470 620	A 5 % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар Acc. to EN ISO 148 - 1 KV(10x10mm) (L) min 50J/-50°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость (C30)	^{0}C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
899081/3652 Longitudinal	394	546	33,4		93 - 117 - 136	115		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 5 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to EN 10893-10 kl. U2/C on longitudinal defects in 100 % pipes - positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок
3653,3654

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spelnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Manufacturer's Mark/ EN 10210-1/ S355J2H/ EN 10225-3/ S355NLHHO/ Heat number/ Size/ Length / No of pipe/ Technical Inspection Mark/ OF240155/TUV Mark

TÜV 15

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

(Z03)**Kontrola Jakości** Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	(Z05-Z99)**Dyrekcja** Direction Management Direktion Дирекция	(Z05-Z99)**Przedstawiciel Zamawiającego-** Le représentant d' acheteur Purchaser's representative Vertreter des Bestellers Покупателя представительство	
KJ 21/632 Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	TÜV THÜRINGEN MSc. Eng. Dariusz Cenkier TÜV Inspector	19.04.2024 26/2024/TUV

Approved by QUALITY2 on 29/04/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000419	122A70C	Q012400255

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **23.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 28/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/ Strona Page Page Seite Страница **1/2**

(A10÷A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **TAL**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** **ITALY**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF240155 **MATERIAL DELIVERED ON BEHALF OF TAL-YOUR PO NBR 1724000419 122A70 (TAL REF 324000510)**	**H2400250/1/1** **136943**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Piéces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes. Made in acc. to EN 10210-1/06/ EN 10225-3:2019. Dimensions acc. to EN10210-2. Surface grinded or shot blasted. Normalized 900°C/20'. Pipes ultrasonic testing. Raw material and end product of Polish origin. CN code: 7304 39 83 20	(B09) **355,6 x 14,2 mm** **7 - 11,5 m**	(B02) **S355J2H** **S355NLHHO**	(B07) **899094**	(B08) **4**	(B15) **43,25**	(B13) **5154**

UKCA
0879 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR--EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCE/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0888
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été execute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**	**Mo**	**V**	**Al**
(B07) **899094**	**0,16**	**1,21**	**0,20**	**0,008**	**0,002**	**0,07**	**0,13**	**0,21**	**0,02**	**0,05**	**0,035**
	N	**Ti**	**Nb**	**B**	**Ceq**						
	0,011	**0,000**	**0,000**	**0,0002**	**0,41**						

Approved by QUALITY2 on 17/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Re MPa min 355	Rm MPa 470 620	A 5 % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар Acc. to EN ISO 148 - 1 KV(10x10mm) (L) min 50J/-50°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость (C30)	°C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
899094/3680 **Longitudinal**	**417**	**561**	**35,0**		**156 - 148 - 142**	**149**		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99)

(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 5 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to EN 10893-10 kl. U2/C on longitudinal defects in 100 % pipes - positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок
3680,3682,3683,3684

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Manufacturer's Mark/ EN 10210-1/ S355J2H/ EN 10225-3/ S355NLHHO/ Heat number/ Size/ Length / No of pipe/ Technical Inspection Mark/ OF240155/TUV Mark

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вущенмеонованных Испытаний признан годным.

(Z03)**Kontrola Jakości** Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	(Z05-Z99)**Dyrekcja** Direction Management Direktion Дирекция	(Z05-Z99)**Przedstawiciel Zamawiającego-** Le représentant d' acheteur Purchaser's representative Vertreter des Bestellers Покупателя представительство
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	TÜV THÜRINGEN MSc. Eng. Dariusz Gebicki TÜV Inspector 05.04.2024 28/2024/TUV

KJ 21/632

TÜV 15

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 17/04/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000419	122A70C	Q012400272

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

02.05.2024

Emillani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

alchemia S.A.
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 28/2024/TUV/A1

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **TAL**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** **ITALY**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF240155 **MATERIAL DELIVERED ON BEHALF OF TAL-YOUR PO NBR 1724000419 122A70 (TAL REF 324000510)**	**H2400250/1/1** **136943**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Piéces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01.B03) Hot rolled seamless steel pipes. Made in acc. to EN 10210-1/06/ EN 10225-3:2019. Dimensions acc. to EN10210-2. Surface grinded or shot blasted. Normalized 900°C/20'. Pipes ultrasonic testing. Raw material and end product of Polish origin. CN code: 7304 39 83 20	(B09) **355,6 x 14,2 mm** **6,68 - 11,5 m**	(B02) **S355J2H** **S355NLHHO**	(B07) **899094**	(B08) **1**	(B15) **6,68**	(B13) **762**

UKCA
0879 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR--EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCE/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0888
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG

(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**	**Mo**	**V**	**Al**
(B07) **899094**	0,16	1,21	0,20	0,008	0,002	0,07	0,13	0,21	0,02	0,05	0,035
	N	**Ti**	**Nb**	**B**	**Ceq**						
	0,011	0,000	0,000	0,0002	0,41						

Approved by QUALITY2 on 29/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Re MPa min 355	Rm MPa 470 620	A 5 % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар Acc. to EN ISO 148 - 1 KV(10x10mm) (L) min 50J/-50°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость (C30)	^{0}C MPa min
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
899094/3680 Longitudinal	417	561	35,0		156 - 148 - 142	149		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 5 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to EN 10893-10 kl. U2/C on longitudinal defects in 100 % pipes - positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок
3681

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Manufacturer's Mark/ EN 10210-1/ S355J2H/ EN 10225-3/ S355NLHHO/ Heat number/ Size/ Length / No of pipe/ Technical Inspection Mark/ OF240155/TUV Mark

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушенменованных Испытаний признан годным.

(Z03)**Kontrola Jakości** Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	(Z05-Z99)**Dyrekcja** Direction Management Direktion Дирекция	(Z05-Z99)**Przedstawiciel Zamawiającego-** Le représentant d' acheteur Purchaser's representative- Vertreter des Bestellers Покупатель представительство
KJ 21/632 Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	TÜV THÜRINGEN MSc. Eng. Dariusz Gerbich TÜV Inspector 19.04.2024 28/2024/TUV/A1

TÜV 15

Approved by QUALITY2 on 29/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 26/2024/TUV

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.2**
/nr normy/

(A10÷A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** TAL
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** ITALY
Adresse-Address-Versandadreesse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08.09) Nr potwierdzenia No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF240155 **MATERIAL DELIVERED ON BEHALF OF TAL-YOUR PO NBR 1724000419 122A70 (TAL REF 324000510)**	**H2400250/2/1** **136800**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Piéces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. 1. M. пог. м	kg lb (kg) кг
(B01.B03) Hot rolled seamless steel pipes. Made in acc. to EN 10210-1/06/ EN 10225-3:2019. Dimensions acc. to EN10210-2. Surface grinded or shot blasted. Normalized 900ºC/42'. Pipes ultrasonic testing. Raw material and end product of Polish origin. CN code: 7304 39 83 20	(B09) **406,4 x 21,44 mm** **6,5 - 10 m**	(B02) **S355J2H** **S355NLHHO**	(B07) **899081**	(B08) **3**	(B15) **19,62**	(B13) **3960**

UK CA
0879 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR--EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCE/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0888
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG

(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu	Mo	V	Al
(B07) **899081**	0,15	1,24	0,21	0,011	0,003	0,05	0,10	0,19	0,02	0,05	0,026
	N	Ti	Nb	B	Ceq						
	0,009	0,001	0,000	0,0002	0,40						

Approved by QUALITY2 on 29/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Re MPa min 355	Rm MPa 470 620	A 5 % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар Acc. to EN ISO 148 - 1 KV(10x10mm) (L) min 50J/-50°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний	Twardość Dureté Hardness Härte Твердость (C30)	^{0}C MPa min
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
899081/3652 Longitudinal	394	546	33,4		93 - 117 - 136	115		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ

(D51-D99) (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 5 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to EN 10893-10 kl. U2/C on longitudinal defects in 100 % pipes - positive results

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

3653,3654

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Manufacturer's Mark/ EN 10210-1/ S355J2H/ EN 10225-3/ S355NLHHO/ Heat number/ Size/ Length / No of pipe/ Technical Inspection Mark/ OF240155/TUV Mark

TÜV 15

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеменованных Испытаний признан годным.

(Z03)**Kontrola Jakości** Contróle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль	(Z05-Z99)**Dyrekcja** Direction Management Direktion Дирекция	(Z05-Z99)**Przedstawiciel Zamawiającego-** Le représentant d' acheteur Purchaser's representative Vertreter des Bestellers Покупателя представительство
KJ 21/632 Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	TÜV THÜRINGEN MSc. Eng. Dariusz Cebulla TÜV Inspector 19.04.2024 26/2024/TUV

Approved by QUALITY2 on 29/04/24

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000568	123A90A	Q012400325

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

15.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO IEC 17025:2019

ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24C3393 (A03)
Аркуш / Page 1
Аркушів / Pages 6
Дата / Data 08.04.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # (A07) COC24/0293
	Заводське замовлення/Production order # (A08) 24-001235
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) PO#OF240060
Транспортний засіб/ Vehicle № AO6117BO/AO0928XP	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Завод сертифікований за PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice.
Розміри згідно стандарту ASME B36.10M-2018./Dimensions and weights according to ASME B36.10M-2018.
Труби відповідають стандарту ASME для котлів і посудини під тиском, розділ II, частина D, таблиця Y-1./Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Система менеджменту якості виробника сертифікована за ISO 9001:2015, сертифікат № 20100223014373/00, виданий компанією TUV AUSTRIA CERT GMBH, дійсний до 2025-06-06 ./ The manufacturer's quality management system is certified according to ISO 9001:2015 certificate No: 20100223014373/00 issued by TUV AUSTRIA CERT GMBH, valid until 2025-06-06.
Труби не містять радіаційні елементи./ Pipes do not contain radiation elements.
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).
Залишковий магнетизм не більше 30 Gs./The residual magnetism of less than 30 Gs.
Сталь повністю оброблена алюмінієм і виготовлена на практиці дрібної зернистості/Steel is Fully Aluminum Killed and made to fine grain practice.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилення до нього./The order is based on the requirements of specification TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Величина зерна max 7 балів відповідно ASTM E112./Grain size of max 7 points ASTM E112.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 880... 1000 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 880 deg C to 1000 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundie#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) Фактична вага Actual weight нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-VR2-16875		1240954	1638	323.8	12.70	10.00-11.80	20,96	2	2057	2052
2	24-VR2-16876		1240954	1638	323.8	12.70	10.00-11.80	20,79	2	2047	2042
3	24-VR2-16877		1240954	1638	323.8	12.70	10.00-11.80	20,55	2	2034	2029
4	24-VR2-16878		1240954	1638	323.8	12.70	10.00-11.80	20,63	2	2030	2025
5	24-VR2-16879		1240954	1638	323.8	12.70	10.00-11.80	21,14	2	2056	2051
6	24-VR2-16881		1240954	1638	323.8	12.70	10.00-11.80	21,02	2	2050	2045
7	24-VR2-16882		1240954	1638	323.8	12.70	10.00-11.80	21,13	2	2052	2047
8	24-VR2-16884		1240954	1638	323.8	12.70	10.00-11.80	21,01	2	2058	2053
9	24-VR2-16889		1240954	1638	323.8	12.70	10.00-11.80	10,69	1	1040	1039
10	24-VR2-16891		1240954	1638	323.8	12.70	10.00-11.80	21,25	2	2088	2083
11	24-VR2-16893		1240954	1638	323.8	12.70	10.00-11.80	21,03	2	2053	2048
				NPS 12	**Sch XS**	**РАЗОМ/TOTAL**		**220,20**	**21**	**21565**	**21514**
						ПАКУНКІВ/BUNDLES 11					

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 03 MAG. 2024

Approved by QUALITY1 on 15/04/24

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ROSETTI MARINO S.P.A. P.O.1724000568 123A90A TAL JOB N°324000703
N° 1 MT 10,4 HEAT 1240954 DIMENSIONS 323,8 x 12,7

INTERPIPE
NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201340

ООВ ВНІТІ-ТЕСТ
№ 80054
ДСТУ ISO 9001:2015

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24C3393 (A03)
Аркуш / Page 2
Аркушів / Pages 6
Дата / Data 08.04.2024

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR
DATE 03 MAG. 2024

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INTERPIPE NIKO TUBE

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ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C3393 (A03)
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(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	N x1000	CEV x100	1	2
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	20	43	0.11	0.15
1240954	14.6	122.6	20.4	3	13	9	11.4	20.3	11	3	74	2	31	5.5	41	0.08	0.08

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	N x1000	CEV x100	1	2
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	20	43	0.11	0.15
1240954		1	14	122	22	4	11	8	10	18	11	1	71	1	30	7	39	0.07	0.07
		2	15	123	21	4	12	9	11	19	10	3	74	1	32	7	41	0.08	0.08

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E. BOTTI DATE 03 MAG. 2024

Approved by QUALITY1 on 15/04/24

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
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No : 24C3393 (A03)
Аркуш / Page 4
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Дата / Data 08.04.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 35	(C13) Відносне подовження Elongation 35 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	14,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	-				
1240954	1638	560	-	405	-	34,0	-	-	-	-	L		8.9	35
1240954	1638	560	-	405	-	34,0	-	-	-	-	L		8.9	35

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 25	(C13) Відносне подовження Elongation 25 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	-				
1240954	1638	572	-	409	-	29,0	-	-	-	-	L		5	25

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 03 MAG. 2024

Approved by QUALITY1 on 15/04/24

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201360

ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C3393 (A03)
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Дата / Data 08.04.2024

Випробування на удар/Impact test

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240954	1638	T	KV -40°C	27	188	152	138	159		10x7.5

Випробування на удар/Impact test ASTM A370

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240954	1638	T	KV -52°C	27	130	150	93	124		10x10
1240954	1638	T	KV 0°C	27	264	283	272	273	90 95 95	10x10

Випробування на удар/Impact test ASTM A370/ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240954	1638	L	KV -45°C	18	92	122	181	132		10x10

Випробування на удар/Impact test ISO 6892-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240954	1638	T	KV -20°C	35	170	158	170	166		10x7.5

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки Heat #	(B07.2) Номер партії Lot #	HRB (C31.1) 1	HRB (C31.1) 2	HRB (C31.1) 3	HRB (C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	HB (C31.3) 2	HB (C31.3) 3	HB (C31.3) ср.знач./av.	HV (C31.4) 1	HV (C31.4) 2	HV (C31.4) 3	HV (C31.4) 4	HV (C32.4) ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1240954	1638	85	85	84	85	<22	-	-	-	-	-	-	-	-	-
1240954	1638	85	85	85	85	<22	-	-	-	-	-	-	-	-	-

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. POTTI DATE 03 MAG. 2024

Approved by QUALITY1 on 15/04/24

INTERPIPE NIKO TUBE

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ООВ ВНІТІ-ТЕСТ
№ 80054
ДСТУ ISO 9001:2015

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Металографічні випробування / Metallurgical tests

(B07.1) Номер плавки Heat #	(C00.1) Номер партії Lot #	Малюнок Figure	Полосчатость Striation	Відманштетт Vidmanshtett	Нітриди і карбонітриди точкові / строчечного Nitrides and carbonitrides of Tispot/stitch	Величина зерна Grain size номер/number					
		бал/points	бал/points	бал/points	бал/points	1		2		3	
min		-	-	-	-	7		7		7	
max		-	-	-	-	-		-		-	
1240954	1638	-	-	-	-	8,5	8,5	-	-	-	-

(C50,D55)

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	20,5MPa/10 sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-3./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-3.	100%	Задовільно / Satisfactory
Контроль кінців труб/ SEA inspectio	Кінці труб, неконтрольовані установками автоматизованого неруйнівного контролю, обрізані./The pipes ends which aren't covered by the automated inspection system, are cut off.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)

Маркування клеймами/ Dot marking

{HEAT}I

(Z01)

Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
08.04.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Васюк Я.В./Vasyuk Ya.V.
INTERPIPE NIKO TUBE E5	

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 3 MAG. 2024

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)

Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phpne info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

Approved by QUALITY1 on 15/04/24

INTERPIPE NIKO TUBE

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C2993 (A03)
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Аркушів / Pages 7
Дата / Data 28.03.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # (A07) COC24/0293
	Заводське замовлення/Production order # (A08) 24-001235
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) OF240060
Транспортний засіб/ Vehicle № BK1874CK/BK5810XT	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Завод сертифікований за PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice.
Розміри згідно стандарту ASME B36.10M-2018./Dimensions and weights according to ASME B36.10M-2018.
Труби відповідають стандарту ASME для котлів і посудини під тиском, розділ II, частина D, таблиця Y-1./Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Система менеджменту якості виробника сертифікована за ISO 9001:2015, сертифікат № 20100223014373/00, виданий компанією TUV AUSTRIA CERT GMBH, дійсний до 2025-06-06 ./ The manufacturer's quality management system is certified according to ISO 9001:2015 certificate No: 20100223014373/00 issued by TUV AUSTRIA CERT GMBH, valid until 2025-06-06.
Труби не містять радіаційні елементи./ Pipes do not contain radiation elements.
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).
Залишковий магнетизм не більше 30 Gs./The residual magnetism of less than 30 Gs.
Сталь повністю оброблена алюмінієм і виготовлена на практиці дрібної зернистості/Steel is Fully Aluminum Killed and made to fine grain practice.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилення до неї/The order is based on the requirements of specification TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Величина зерна max 7 балів відповідно ASTM E112./Grain size of max 7 points ASTM E112.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 880... 1000 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 880 deg C to 1000 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundie#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD мм mm	(B09) Товщина стінки WT мм mm	(B010) Довжина Length м m	(B11) Загальна довжина Total length м m	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross кг kg	(B13) Фактична вага Actual weight нетто net кг kg
1	24-VR2-14502		1240760	1523	219.1	12.70	10.00-11.80	23,51	2	1526	1521
2	24-VR2-14510		1240760	1523	219.1	12.70	10.00-11.80	23,54	2	1531	1526
3	24-VR2-14516		1240760	1523	219.1	12.70	10.00-11.80	23,54	2	1530	1525
4	24-VR2-14517		1240760	1523	219.1	12.70	10.00-11.80	23,51	2	1532	1527
5	24-VR2-14518		1240760	1523	219.1	12.70	10.00-11.80	23,53	2	1531	1526
6	24-VR2-14520		1240763	1521	219.1	12.70	10.00-11.80	20,44	2	1321	1316
7	24-VR2-14521		1240763	1521	219.1	12.70	10.00-11.80	20,49	2	1318	1313
8	24-VR2-14522		1240763	1521	219.1	12.70	10.00-11.80	20,40	2	1319	1314
9	24-VR2-14523		1240763	1521	219.1	12.70	10.00-11.80	20,32	2	1305	1300
10	24-VR2-14524		1240763	1521	219.1	12.70	10.00-11.80	20,30	2	1306	1301
11	24-VR2-14525		1240763	1521	219.1	12.70	10.00-11.80	20,34	2	1318	1313
12	24-VR2-14530		1240763	1521	219.1	12.70	10.00-11.80	20,58	2	1319	1314
13	24-VR2-14531		1240763	1521	219.1	12.70	10.00-11.80	20,57	2	1320	1315
14	24-VR2-14532		1240763	1521	219.1	12.70	10.00-11.80	20,57	2	1319	1314

BUREAU VERITAS ITALY
WITNESSED - NOTED - REVIEWED
SURVEYOR
DATE 03 MAG. 2024

Approved by QUALITY1 on 08/04/24

ROSETTI MARINO S.P.A. P.O.1724000568 123A90A TAL JOB N°324000703
N° 6 MT 70,6 HEAT 1240760 DIMENSIONS 219,1 x 12,7

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO IEC 17025:2019 201360

ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
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No : 24C2993 (A03)
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Дата / Data 28.03.2024

№ поз. Item No	(B07.4) Номер пакунка Bundie#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD мм mm	(B09) Товщина стінки WT мм mm	(B010) Довжина Length м m	(B11) Загальна довжина Total length м m	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross кг kg	(B13) Фактична вага Actual weight нетто net кг kg
15	24-VR2-14533		1240763	1521	219.1	12.70	10.00-11.80	20,55	2	1319	1314
				NPS 8	**Sch 80 XS**	**РАЗОМ/TOTAL**		**322,19**	**30**	**20814**	**20739**
						ПАКУНКІВ/BUNDLES 15					

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 03 MAG. 2024

Approved by QUALITY1 on 08/04/24

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ООВ ВНІТІ-ТЕСТ № 60054 ДСТУ ISO 9001:2015

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No : 24C2993 (A03)
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(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV x100	1	2
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	43	0.11	0.15
1240760	15	123.8	19.4	4	13	12.8	12.9	23.5	12	2	67	1	27	0.4	6.3	42	0.07	0.07
1240763	14.8	123.2	21	4	12	10.1	12.6	21.7	14	3	66	2	27	0.4	5.1	41	0.07	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV x100	1	2
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	43	0.11	0.15
1240760		1	15	124	20	4	12	13	12	23	12	1	66	1	27	0.5	7	42	0.07	0.07
		2	14	123	20	4	12	13	12	22	12	1	65	1	27	0.4	7	41	0.07	0.07
1240763		1	16	124	23	4	11	11	12	22	12	2	65	1	27	0.4	7	43	0.07	0.07
		2	15	125	23	4	11	11	12	22	12	2	64	1	27	0.4	7	42	0.07	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti

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Approved by QUALITY1 on 08/04/24

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C2993 (A03)
Аркуш / Page 4
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Дата / Data 28.03.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 35	(C13) Відносне подовження Elongation 35 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	27,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	0.85				
1240760	1523	570	-	415	-	33,0	-	-	-	0,73	L		8.9	35
1240760	1523	575	-	420	-	31,0	-	-	-	0,73	L		8.9	35
1240763	1521	575	-	415	-	35,0	-	-	-	0,72	L		8.9	35
1240763	1521	580	-	415	-	34,0	-	-	-	0,72	L		8.9	35

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 25	(C13) Відносне подовження Elongation 25 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0.85				
1240760	1523	579	-	401	-	29,5	-	-	-	0,69	L		5	25
1240763	1521	570	-	403	-	29,0	-	-	-	0,71	L		5	25

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

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SURVEYOR F. BOTTI
DATE 03 MAG. 2024

Approved by QUALITY1 on 08/04/24

ROSETTI MARINO S.P.A. P.O.1724000568 123A90A TAL JOB N°324000703
N° 6 MT 70,6 HEAT 1240760 DIMENSIONS 219,1 x 12,7

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO IEC 17025:2019

ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C2993 (A03)
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Випробування на удар/Impact test ASTM A370

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240760	1523	T	KV -52°C	28	89	80	61	76,7		10x10
1240760	1523	T	KV 0°C	27	152	162	167	160,3		10x10
1240763	1521	T	KV -52°C	28	81	74	84	79,7		10x10
1240763	1521	T	KV 0°C	27	164	184	177	175,0		10x10

Випробування на удар/Impact test ASTM A370/ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240760	1523	L	KV -45°C	18	97	139	114	116,7		10x10
1240763	1521	L	KV -45°C	18	124	116	114	118,0		10x10

Випробування на удар/Impact test ISO 6892-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240760	1523	T	KV -40°C	27	105	95	104	101,3		10x7.5
1240763	1521	T	KV -40°C	27	100	98	103	100,3		10x7.5

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки	(B07.2) Номер партії	HRB (C31.1) 1	HRB (C31.1) 2	HRB (C31.1) 3	HRB (C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	HB (C31.3) 2	HB (C31.3) 3	HB (C31.3) ср.знач./av.	HV (C31.4) 1	HV (C31.4) 2	HV (C31.4) 3	HV (C31.4) 4	HV (C32.4) ср.знач./av.
Heat #	Lot #														
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1240760	1523	86	85	86	86	<22	-	-	-	-	-	-	-	-	-
1240760	1523	86	86	87	86	<22	-	-	-	-	-	-	-	-	-
1240763	1521	86	86	87	86	<22	-	-	-	-	-	-	-	-	-
1240763	1521	87	86	85	86	<22	-	-	-	-	-	-	-	-	-

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SURVEYOR F. BOTTI
DATE 03 MAG. 2024

Approved by QUALITY1 on 08/04/24

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C2993 (A03)
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Дата / Data 28.03.2024

Металографічні випробування / Metallurgical tests

(B07.1) Номер плавки Heat #	(C00.1) Номер партії Lot #	Малюнок Figure	Полосчатость Striation	Відманштетт Vidmanshtett	Нітриди і карбонітриди точкові / строчечного Nitrides and carbonitrides of Tispot/stitch	Величина зерна Grain size номер/number					
		бал/points	бал/points	бал/points	бал/points	1		2		3	
min		-	-	-	-	7		7		7	
max		-	-	-	-	-		-		-	
1240760	1523	-	-	-	-	8,5	8,5	-	-	-	-
1240763	1521	-	-	-	-	8,5	8,5	-	-	-	-

(C50,D55)

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	20,5MPa/10 sec	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-3./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-3.	100%	Задовільно / Satisfactory
Контроль кінців труб/ SEA inspectio	Кінці труб, неконтрольовані установками автоматизованого неруйнівного контролю, обрізані./The pipes ends which aren't covered by the automated inspection system, are cut off.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)

Маркування фарбою/ Marking paint

{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 219,1 12,7 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 8 SCH 80 XS {отметка приемщика} HF LT -52C S 64,64 COC24/0293 {Тип покрытия}

(A04,B06)

Маркування клеймами/ Dot marking

{HEAT}I

(Z01)

Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
28.03.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Шпак Т.А./Shpak T.A.
INTERPIPE NIKO TUBE E5	

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E. BOTTI DATE 03 MAG. 2024

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

Approved by QUALITY1 on 08/04/24

ROSETTI MARINO S.P.A. P.O.1724000568 123A90A TAL JOB N°324000703
N° 6 MT 70,6 HEAT 1240760 DIMENSIONS 219,1 x 12,7

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201369

ООВ ВНІТІ-ТЕСТ
№ 80054
ДСТУ ISO 9001:2015

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(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phpne info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

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DATE 03 MAG. 2024

Approved by QUALITY1 on 08/04/24

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP03012 | **Data** Date MAY,10/2024 | **Pagina** Page 1 **di** of 2

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Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

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All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000703
L.P.M. ORDER: 24-001039

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724000568 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 06/05/2024 DDT: 202402742

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA03218	703/7	TEST COUPON FROM PIPE O.D. 323.8 mm WTH. 12.7 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1 PIPE	PIPE O.D. 323.8 mm WTH. 12.7 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	703/7	24CA03218	1240954

Doc. Fornito dal cliente Customer's document: DISTINTA DI PRELIEVO PROVE MECCANICHE ED ANALISI CHIMICHE 24/053

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 10/05/2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO N. 824 PROV. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP03012

Data Date MAY,10/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22**

Data delle prove – Date of testing: **MAY,10/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-24 Gr. 6						≥ 240		≥ 415		≥ 12			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 23.4		≤0.93	
703/7	24CA03218	24PR14159	19.03 x 12.79	243.39	50	T	+ 23		417		560		33.8		0.75

REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22**

Data delle prove – Date of testing: **MAY,10/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
703/7	24CA03218	24PR14160	10x10x55	BLM	-50	≥ 27/27	39	100	146	95									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO DISTINTA DI PRELIEVO PROVE MECCANICHE ED ANALISI CHIMICHE 24/053.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 10/05/2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO N. 824 PROV. PIACENZA

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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP03013 | **Data** Date MAY,10/2024 | **Pagina** Page 1 **di** of 2

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324000703
L.P.M. ORDER: 24-001039

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724000568 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 06/05/2024 DDT: 202402742

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA03219	703/8	TEST COUPON FROM PIPE O.D. 219.1 mm WTH. 12.7 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1 PIPE	PIPE O.D. 219.1 mm WTH. 12.7 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	703/8	24CA03219	1240760

Doc. Fornito dal cliente Customer's document: DISTINTA DI PRELIEVO PROVE MECCANICHE ED ANALISI CHIMICHE 24/053

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 10/5/2024	E.FERRI	

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP03013

Data Date MAY,10/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-22**

Data delle prove – Date of testing: **MAY,10/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-24 Gr. 6						≥ 240		≥ 415		≥ 30			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 23.3		≤0.93	
703/8	24CA03219	24PR14162	19.08 x 12.65	241.36	50	L	+ 23	412		565		36.4		0.73	

REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-22**

Data delle prove – Date of testing: **MAY,10/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
703/8	24CA03219	24PR14161	10x10x55	BLM	-50	≥ 27/27	118	95	56	90										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO DISTINTA DI PRELIEVO PROVE MECCANICHE ED ANALISI CHIMICHE 24/053.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 10/05/2024	E.FERRI	

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1724000568	123A90A	Q012400214

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **09.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000880 **Rev. N°:** 0 **Date:**

Inspection Date: 29/03/2024

Ref.: 1724000568 123A90A

Our Job n. 324000703

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		457X19,05	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,16	HUTA BATORY	898867	346/2024/AH
				1	11,3	HUTA BATORY	898867	346/2024/AH
			Total:	**2**	**22,46**			
20000		406,4X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,74	ARCELORMITTAL ROMAN	F05512	B 25733/1
				1	11,7	ARCELORMITTAL ROMAN	F05512	B 25733/1
			Total:	**2**	**23,44**			
30000		355,6X19,05	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,23	ARCELORMITTAL ROMAN	815792	B 28234/2
				1	11,66	ARCELORMITTAL ROMAN	815637	B 28234/1
			Total:	**2**	**22,89**			
50000		273X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED ~~HOLD~~ REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

1475/ 3402

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000880** **Rev. N°:** **0** **Date:**

Inspection Date: 29/03/2024

Ref.: 1724000568 123A90A

Our Job n. 324000703

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
				1	11,42	ARCELORMITTAL ROMAN	42894K	B 24184/1
				1	11,49	ARCELORMITTAL ROMAN	42894K	B 24184/1
				1	11,67	ARCELORMITTAL ROMAN	42894K	B 24184/1
				1	11,62	ARCELORMITTAL ROMAN	42894K	B 24184/1
				1	11,76	ARCELORMITTAL ROMAN	42894K	B 24184/1
			Total:	**5**	**57,96**			
60000		273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	8,92	LIBERTY OSTRAVA	56110K	73555/23
				1	9,2	LIBERTY OSTRAVA	56110K	83371/23
				1	9,29	LIBERTY OSTRAVA	56110K	83371/23
			Total:	**3**	**27,41**			

BUREAU VERITAS ITALY
WITNESSED ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 346/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** T.A.L
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 240041	**H2400093/2/1** **132709,132712**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03)	(B09)	(B02)	(B07)	(B08)	(B15)	(B13)
Hot rolled seamless steel pipes acc.to API 5L - PSL1 (Errata 1)/2018/ ASTM A333/A333M/18/ ASME SA333/ SEC.II.PART.A/21/ EN 10216-3/13 - TC1. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface lacquered. Bevelled ends acc. to ASME B16.25 fig.3.A. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	**18" x 0,750" (457 x 19,05 mm) 9 - 11,8 m**	**X52/L360/6 P355NL1+N**	**898867**	**3**	**33,60**	**7024**

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,14	1,26	0,22	0,007	0,003	0,07	0,09	0,14
product analysis	0,16	1,27	0,22	0,009	0,003	0,08	0,09	0,15
product analysis	0,17	1,27	0,21	0,008	0,003	0,07	0,09	0,15
(B07) **898867**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,034	0,007	0,000	0,001	0,40	
product analysis	0,04	0,06	0,031	0,009	0,000	0,001	0,42	
product analysis	0,04	0,06	0,031	0,009	0,000	0,001	0,43	

Approved by QUALITY1 on 14/02/24

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ MPa min 360	Rm MPa min 460	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Среднее		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½"					Mixed area		152	
898867/1571	399	539	37,0		156 - 198 - 178	177	152	
898867/1572	372	532	33,6					
Longitudinal								
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 355	Rm 490 650	A5 % min 22,0					
898867/1572	373	532	32,6		156 - 73 - 118	116		
Longitudinal								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)
Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.
Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material zostal zbadany i spelnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52/L360 - PSL1/A/SA333/6/EN 10216-3/P355NL - TC1.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
Z-ca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 05.02. 2024 r. 346/2024/AH Strona Page Page Seite Страница 2/2

KJ 21/634

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Approved by QUALITY1 on 14/02/24

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/4 **B 25733/1** **28.07.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 5.359 tons - lbs	Total Length: 35.04 meters - feets	Pieces: 3 / Bundles: -
Buyer's reference: PO NO. : OF220197 Rev.0 **Contract 50005451**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;			
	Dimensions: 406.40 x 15.88 mm -	Schedule: -	Length: 10.00 - 11.80 m -	- -

Item	Item Client
28	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
F05512		Heat analysis		0.15	1.23	0.20	0.002	0.011	0.05	0.02	0.01	0.033	0.00	0.064	0.001	0.003	0.0003	0.0055
F05512	22-716	Product analysis		0.15	1.24	0.22	0.002	0.012	0.05	0.03	0.01	0.035	0.00	0.062	0.001	0.002	0.0003	0.0058
F05512	22-716	Product analysis		0.15	1.25	0.21	0.002	0.012	0.05	0.03	0.01	0.034	0.00	0.063	0.001	0.002	0.0003	0.0056

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
F05512		Heat analysis		6.00	0.065	0.068	0.127	0.38	0.06
F05512	22-716	Product analysis		6.03	0.063	0.065	0.125	0.38	0.06
F05512	22-716	Product analysis		6.07	0.064	0.066	0.126	0.38	0.06

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 05/08/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 25733/1
28.07.2022

ArcelorMittal

Buyer: T.A.L. S.P.A con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.359 tons - lbs	35.04 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF220197 Rev.0
Contract 50005451

Dimensions: 406.40 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
28	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
F05512	Longitudinal Flat	50.8	-	40.00	-	17.20	-	688.0	-	22-2822	427.00	-	532.00	-	44.20	0.80
F05512	Longitudinal Flat	50.8	-	40.00	-	16.70	-	668.0	-	22-2822	425.00	-	527.00	-	43.30	0.81
F05512	Longitudinal Flat	-	-	20.00	-	17.20	-	344.0	-	22-2042	425.30	-	529.10	-	39.30	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
F05512	22-4378	Transversal	10x10x55	0	-	192	203	180	27.0	192	-	-	-	95	100	95	1.71	1.80	1.63
F05512	22-4379	Longitudinal	10x10x55	-52	27.0	212	231	221	40.0	221	-	-	-	100	100	100	1.88	1.98	1.93

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
F05512	22-2597	-	-	-	-	-	-	-	<20
F05512	22-2597	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 05/08/22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 3/4 **B 25733/1** **28.07.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 5.359 tons - lbs	Total Length: 35.04 meters - feets	Pieces: 3 Bundles: -
Buyer's reference: PO NO. : OF220197 Rev.0 **Contract 50005451**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;			

Dimensions: 406.40 x 15.88 mm -	Schedule: -	Length: 10.00 - 11.80 m -	- -

Item	Item Client
28	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
F05512	22-994	450	302.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
F05512	22-4239	OK
F05512	22-4239	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
F05512	22-928	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
F05512	3	35.04	5359

BUREAU VERITAS
ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 05/08/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 25733/1
28.07.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.359 tons - lbs	35.04 meters - feets	3	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.8/22.02.2022; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF220197 Rev.0

Contract 50005451

Dimensions: 406.40 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
28	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300046.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 19 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 05/08/22

ROSETTI MARINO S.P.A. P.O.1724000568 123A90A TAL JOB N°324000703
N° 1 MT 11,66 HEAT 815637 DIMENSIONS 355,6 x 19,05

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 28234/1
28.08.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.371 tons - lbs	46.62 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1
Contract 50005926

Dimensions: 355.60 x 19.05 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

Item	Item Client
3	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
815637		Heat analysis		0.14	1.22	0.22	0.005	0.011	0.05	0.07	0.14	0.037	0.01	0.064	0.002	0.003	0.0001	0.0080
815637	23-734	Product analysis		0.14	1.20	0.22	0.005	0.010	0.04	0.07	0.14	0.036	0.01	0.062	0.002	0.003	0.0001	0.0078
815637	23-734	Product analysis		0.14	1.21	0.20	0.004	0.010	0.05	0.06	0.13	0.036	0.01	0.062	0.002	0.003	0.0001	0.0078

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
815637		Heat analysis		4.63	0.066	0.069	0.269	0.38	0.20
815637	23-734	Product analysis		4.62	0.064	0.067	0.257	0.38	0.19
815637	23-734	Product analysis		4.62	0.064	0.067	0.257	0.38	0.19

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 04/09/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 28234/1
28.08.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.371 tons - lbs	46.62 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1
Contract 50005926

Dimensions: 355.60 x 19.05 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
3	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
815637	Longitudinal Flat	50.8	-	40.00	-	20.30	-	812.0	-	23-2416	425.00	-	534.00	-	43.90	0.80
815637	Longitudinal Flat	50.8	-	40.00	-	20.70	-	828.0	-	23-2416	427.00	-	536.00	-	45.10	0.80
815637	Longitudinal Flat	-	-	20.00	-	19.80	-	396.0	-	23-1385	424.00	-	533.30	-	41.50	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
815637	23-3168	Longitudinal	10x10x55	-52	27.0	193	186	189	40.0	189	-	-	-	95	95	95	1.71	1.65	1.68
815637	23-3169	Transversal	10x10x55	0	-	178	183	175	27.0	179	-	-	-	95	95	95	1.56	1.62	1.55

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
815637	23-2075	-	-	-	-	-	-	-	<20
815637	23-2075	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 04/09/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 28234/1
28.08.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
7.371 tons - lbs	46.62 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1
Contract 50005926

Dimensions: 355.60 x 19.05 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
3	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
815637	23-793	450	290.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
815637	23-2337	OK
815637	23-2337	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
815637	23-428	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
815637	4	46.62	7371

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 04/09/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 28234/1 28.08.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 7.371 tons - lbs	Total Length: 46.62 meters - feets	Pieces 4	Bundles -
Buyer's reference: PO NO. : OF230552 rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;				
Contract 50005926	Dimensions: 355.60 x 19.05 mm -	Schedule: 80	Length: 10.00 - 11.80 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
3	-		205	-	20.5	5	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX I, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 20 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 04/09/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 1/4 **B 28234/2** **07.09.2023**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 1.776 tons - lbs	Total Length: 11.23 meters - feets	Pieces: 1 / Bundles: -
Buyer's reference: PO NO. : OF230552 rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;			
Contract 50005926	Dimensions: 355.60 x 19.05 mm -	Schedule: 80	Length: 10.00 - 11.80 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
3	-		205	-	20.5	10	L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
815792		Heat analysis		0.14	1.21	0.17	0.005	0.010	0.11	0.11	0.15	0.025	0.02	0.063	0.002	0.002	0.0001	0.0097
815792	23-815	Product analysis		0.14	1.23	0.19	0.004	0.010	0.10	0.10	0.15	0.027	0.02	0.062	0.002	0.002	0.0001	0.0098
815792	23-815	Product analysis		0.15	1.22	0.19	0.005	0.009	0.10	0.11	0.14	0.028	0.02	0.062	0.002	0.002	0.0001	0.0096

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
815792		Heat analysis		2.58	0.065	0.067	0.347	0.39	0.28
815792	23-815	Product analysis		2.76	0.064	0.066	0.336	0.40	0.27
815792	23-815	Product analysis		2.92	0.064	0.066	0.326	0.41	0.26

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 12/09/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 28234/2

07.09.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.776 tons - lbs	11.23 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1

Contract 50005926

Dimensions: 355.60 x 19.05 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
3	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
815792	Longitudinal Flat	50.8	-	40.00	-	19.80	-	792.0	-	23-2490	425.00	-	534.00	-	43.80	0.80
815792	Longitudinal Flat	50.8	-	40.00	-	20.30	-	812.0	-	23-2490	426.00	-	537.00	-	44.20	0.79
815792	Longitudinal Flat	-	-	20.00	-	20.10	-	402.0	-	23-1444	424.10	-	532.10	-	41.20	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
815792	23-3274	Transversal	10x10x55	0	-	213	226	200	27.0	213	-	-	-	100	100	100	1.89	1.94	1.79
815792	23-3275	Longitudinal	10x10x55	-52	27.0	235	221	247	40.0	234	-	-	-	100	100	100	1.98	1.93	2.06

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
815792	23-2128	-	-	-	-	-	-	-	<20
815792	23-2128	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 12/09/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 28234/2
07.09.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.776 tons - lbs	11.23 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230552 rev.1
Contract 50005926

Dimensions: 355.60 x 19.05 mm
-

Schedule: 80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
3	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
815792	23-818	450	294.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
815792	23-2403	OK
815792	23-2403	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
815792	23-440	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
815792	1	11.23	1776

BUREAU VERITAS
ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 12/09/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4	B 28234/2	07.09.2023
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 1.776 tons - lbs	Total Length: 11.23 meters - feets	Pieces 1 / Bundles -
Buyer's reference PO NO. : OF230552 rev.1	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
Contract 50005926	Dimensions: 355.60 x 19.05 mm -	Schedule: 80				Length: 10.00 - 11.80 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -
3	-		205	-	20.5	10	

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 20 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 12/09/23

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

Page 1/3
B 24184/1
28.01.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.348 tons - lbs	92.84 meters - feets	8	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1

Contract 50005363

Dimensions: 273.00 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
54	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
42894K		Heat analysis		0.14	1.25	0.21	0.003	0.011	0.05	0.06	0.17	0.028	0.01	0.073	0.001	0.002	0.0001	0.0055
42894K	22-100	Product analysis		0.14	1.24	0.23	0.003	0.011	0.05	0.05	0.16	0.032	0.01	0.072	0.001	0.002	0.0001	0.0054
42894K	22-100	Product analysis		0.15	1.23	0.22	0.003	0.010	0.05	0.05	0.16	0.031	0.01	0.072	0.001	0.002	0.0001	0.0052

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu + V	CE_IIW
			Max	0.060	0.150	1.000	0.40
			Min	-	-	-	-
42894K		Heat analysis		0.074	0.076	0.366	0.39
42894K	22-100	Product analysis		0.073	0.075	0.342	0.39
42894K	22-100	Product analysis		0.073	0.075	0.342	0.40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
42894K	Longitudinal Flat	50.8	-	40.00	-	17.50	-	700.0	-	22-423	433.00	-	534.00	-	43.40	0.81
42894K	Longitudinal Flat	50.8	-	40.00	-	16.70	-	668.0	-	22-423	428.00	-	529.00	-	42.80	0.81
42894K	Longitudinal Flat	-	-	20.00	-	17.20	-	344.0	-	22-368A	429.10	-	531.10	-	39.30	0.81

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

DET NORSKE VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 22/03/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 24184/1
28.01.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.348 tons - lbs	92.84 meters - feets	8	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1
Contract 50005363

Dimensions: 273.00 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
54	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
42894K	22-564	Longitudinal	10x10x55	-52	27.0	233	212	227	40.0	224	-	-	-	100	100	100	2.00	1.88	1.98

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
42894K	22-459	-	-	-	-	-	-	-	<20
42894K	22-459	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
42894K	22-147	450	284.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
42894K	22-484	OK
42894K	22-484	OK

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 02/04/2024

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
42894K	22-137	0	10

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY2 on 22/03/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 3/3 **B 24184/1** **28.01.2022**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 9.348 tons - lbs	Total Length: 92.84 meters - feets	Pieces 8 / Bundles -
Buyer's reference PO NO. : OF210777 rev.1	**Standard:** API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015, NACE MR 0175/ISO 15156-1&2-2015;			
Contract 50005363	Dimensions: 273.00 x 15.88 mm -	Schedule: -	Length: 10.00 - 11.80 m -	- -

Item	Item Client
54	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
42894K	8	92.84	9348

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G300047.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 12 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 22/03/22

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **83371/23**

A07	Customer's Order (P.O.) No./Item No.: **OF230663**	A08	Manufacturer's Works Order No.: **59468/0/23**
A11	Supplier's Order No.: **3151031653**	A10	Advice - Note No.: **8151007737**
B08, B12/13	Quantity delivered: pcs bdls **11** / mtrs feet **102,010** / B13 Actual mass kgs lbs **8294**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **273,0 X 12,70 mm (10" SCH60)**		
B02	Steel designation: **L360N/X52N PSL2 Grade 6 P355NL1**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-22,
ASTM A999/A999M-18, ASME SA999/SA999M-23, ASME SA333/SA333M/23
API Spec.5L-46th edit.18 PSL2, ASTM A333/A333M-18 - PED 2014/68/EU
EN 10216-3/13 TC1 - PED 2014/68/EU,
ANSI/NACE MR0175/ISO 15156-23, ANSI/NACE MR0103/ISO 17945-20. ASME Sec.II, Part.D, Table Y-1
Normalized (860 – 945°C) **TS02 Rev. 07 for T.A.L.**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ
56110K	H	0,14	1,24	0,313	0,011	0,005	0,09	0,03	0,05	0,031	0,0093	0,008	0,066	0,002	<0,003	0,0003	0,38
	P	0,13	1,24	0,304	0,011	0,005	0,09	0,04	0,04	0,033	0,0071	0,008	0,065	0,002	<0,001	0,0003	0,37
	P	0,13	1,24	0,299	0,011	0,005	0,09	0,04	0,04	0,032	0,0077	0,008	0,063	0,002	<0,001	0,0002	0,37

Z99 ☐

Test results:

B07 Heat No.	C00 Specimen No.		MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact test				HRB C30-32 Hardness
C04 Requirements:	L360N/X52N Grade 6 P355NL1		360 - 530 min. 240 min. 355	460 - 760 min. 415 490 - 650	min. 27,0 (2") min. 30,0 (2") min. 22,0 (5d)	A) L-10-40J/ -52°C B) INF. Shear area (%) C) T-7,5-21J / -40°C				max. 99
			Longitudinal strip specimen 38,1 mm			Ø	min			
56110K/1	L360N/X52N Gr.6	67007	428	546	42,7	A) 177	222	152	158	84 81
		67009	430	544	43,5	B) 66	100	46	52	
	P355NL1	67011	419	527	24,0	C) 133	142	117	141	

Z99 ☐

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec	20,5 / 10
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing flux - leakage **notch 12.5%**	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X		acc. to **ASTM E570** - longitudinal imperfections – **satisfactory**	X

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018

Z99 ☒ continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Z02 Date of issue **24.10.2023/LB** Tel.:++420 595683644

LIBERTY

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

58

E.z. 2574/16/15/P

Approved by D.MOLINARI on 24/10/23

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **83371/23** Page: **2/2**

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
Residual magnetic field [mT] max.3- satisfactory.
MANUFACTURER OF BILLETS: LIBERTY OSTRAVA
22HRC=99HRBmax.
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties at elevated temperatures for gr. 6 as per ASTM A333/A333M-18.
Grain size min. 7 acc. ASTM E112 is guaranteed.
Elongation (A5) = min. 14% guaranteed (L0= 5.65 * $\sqrt{S0}$)

C71-92 Heat (H) and product (P) chemical analyses (%)

B07 Heat No.	C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test	C30-32 Hardness

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Z02 Date of issue **24.10.2023/LB**

Tel.:++420 595683644

LIBERTY

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by D.MOLINARI on 24/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **73555/23**

A07	Customer's Order (P.O.) No./Item No.: **OF230663**	A08	Manufacturer's Works Order No.: **59468/0/23**
A11	Supplier's Order No.: **3151031653**	A10	Advice - Note No.: **8151007818**
B08, B12/13	Quantity delivered: pcs / bdls: **16**; mtrs / feet: **148,060**; B13 Actual mass kgs / lbs: **12039**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **273,0 X 12,70 mm (10" SCH60)**		
B02	Steel designation: **L360N/X52N PSL2 Grade 6 P355NL1**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-22,
ASTM A999/A999M-18, ASME SA999/SA999M-23, ASME SA333/SA333M/23
API Spec.5L-46th edit.18 PSL2, ASTM A333/A333M-18 - PED 2014/68/EU
EN 10216-3/13 TC1 - PED 2014/68/EU,
ANSI/NACE MR0175/ISO 15156-23, ANSI/NACE MR0103/ISO 17945-20. ASME Sec.II, Part.D, Table Y-1
Normalized (860 – 945°C) **TS02 Rev. 07 for T.A.L.**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ
56110K	H	**0,14**	**1,24**	**0,313**	**0,011**	**0,005**	**0,09**	**0,03**	**0,05**	**0,031**	**0,0093**	**0,008**	**0,066**	**0,002**	**<0,003**	**0,0003**	**0,38**
	P	0,13	1,24	0,304	0,011	0,005	0,09	0,04	0,04	0,033	0,0071	0,008	0,065	0,002	<0,001	0,0003	0,37
	P	0,13	1,24	0,299	0,011	0,005	0,09	0,04	0,04	0,032	0,0077	0,008	0,063	0,002	<0,001	0,0002	0,37

Z99

B07 Heat No.	C00 Specimen No.		C04 Requirements:	C11 Yield Point MPa	C12 Tensile Strength MPa	C13 Elongation %	C40-43 Impact test				C30-32 Hardness HRB
			L360N/X52N	**360 - 530**	**460 - 760**	**min. 27,0** (2")	**A) L-10-40J/ -52°C**				**max. 99**
			Grade 6	**min. 240**	**min. 415**	**min. 30,0** (2")	**B) INF. Shear area (%)**				
			P355NL1	**min. 355**	**490 - 650**	**min. 22,0** (5d)	**C) T-7,5-21J / -40°C**				
				Longitudinal strip specimen 38,1 mm			Ø	min			
56110K/1	L360N/X52N Gr.6	67007		428	546	42,7	A) 177	222	152	158	84 81
		67009		430	544	43,5	B) 66	100	46	52	
	P355NL1	67011		419	527	24,0	C) 133	142	117	141	

Z99

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec	20,5 / 10
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing flux - leakage **notch 12.5%**	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X		acc. to **ASTM E570** - longitudinal imperfections – **satisfactory**	X

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018

Z99 X continues on page 2/2

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Z02 Date of issue **31.10.2023/JN**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.č. 2574/16/15/P

Approved by QUALITY1 on 02/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No: **73555/23** Page: **2/2**

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
Residual magnetic field [mT] max.3- satisfactory.
MANUFACTURER OF BILLETS: LIBERTY OSTRAVA
22HRC=99HRBmax.
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties at elevated temperatures for gr. 6 as per ASTM A333/A333M-18.
Grain size min. 7 acc. ASTM E112 is guaranteed.
Elongation (A5) = min. 14% guaranteed (L0= 5.65 * $\sqrt{S0}$)

C71-92 Heat (H) and product (P) chemical analyses (%)

B07 Heat No.	C	MN	SI	P	S	CU	NI	CR	ALt	N	MO	V	TI	NB	B	CEQ

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test	C30-32 Hardness

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Z02 Date of issue **31.10.2023/JN**

Tel.:++420 595683644

LIBERTY

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 02/11/23

MANUAL UT REPORT

N° 240012UT-002

Date: 28/03/2024

Pag:1/1

Client: Tubi Acciaio Lombarda	**Order:** 1724000568 123A90A	**Job:** 324000703	**COMM.:** 240012
Subclient: ROSETTI MARINO S.P.A.	**Phase/Activity:** Manual UT	**Material:**	ASTM/ASME A/SA 333/6/API5L/X52
Location: Fiorenzuola (PC)	**Procedure:** IL73-140001-MUT	**Specification:**	ASTM E213

Equipment: EPOCH 600 S/N 160941104
Probes: MWB 45-4 S/N 36784

Calibration Blocks: TAL blocks provided & V2
Reference point echo: Notch 12.5%
Surface testing coverage: 100%

Item	dB ref	Heat N°	W.T.	Φ	Quantity	Lenght tot.(m)	Indication			Evaluation
							Longitudinal Position	Axial position	Max Echo	
1	46,5	898867	19,05	457	2	20,0	/	/	/	Accettabile
2	48,7	42894K	15,88	273	5	50,0	/	/	/	Accettabile

Note(*)
457 x 19,05 Produttore Batory
273 x 15,88 Produttore Mittal Roman

BUREAU VERITAS ITALY ~~ACCEPTED~~ NOTED REVIEWED SURVEYOR F. BOTTI DATE 02/04/2024

Signatures:

ECOGLOBAL (Level II°) ISO 9712 RT UT(PA+ToFD) VT PT OG MT

Tech.	Francesco Arrigoni	Signature:		Date: 28/03/2024
Client	Name:	Signature:		Date:
Subclient	Name:	Signature:		Date:

DISTRIBUTION

Original: Subclient

1 Copy: ECOGLOBAL

1 Copy: TAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1724000593	123A90A	Q012400251

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **22.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EUROPE
STEEL
CENTER

Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132570
Your Po nr: 1724000593

ITEM	MATERIAL	Dimension	Grade	CERTIFICATION	Quantity	Length in mm	Total amount of meters	Weight/meter	Total Weight	Heatno	MTC no	Mills name	Origin	HS Code
1	Beams	HEB 600	S355MLO acc EN10225	3.2 acc EN 10204	2	12100	24,2	212,00	5.130,4	66824 & 66825	R5000157473	ArcelorMittal	Luxembourg	72163390
2	Beams	HEB 600	S355MLO acc EN10225	3.2 acc EN 10204	1	12000	12	212,00	2.544,0	81387	R5000160840	ArcelorMittal	Luxembourg	72163390
					3				**7.674,40**					

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrR5000157473
A03

A08 Our reference : 1100689182
A07 Your reference : 6923 REV 0
18.12.2023
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

A06

S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX

B02

Inspection report according to EN 10204:2004 / 3.2

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 600 B	12.000 mm	25,440 to	66824	10,176 to		4
				66825	5,088 to		2
				80369	10,176 to		4
000003	HE 400 B	12.000 mm	14,880 to	80050	14,880 to		8
000009	HE 700 A	11.800 mm	9,629 to	80369	9,629 to		4

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
	Min		**1,00**			**0,14**												
	Max	**0,14**	**1,65**	**0,025**	**0,015**	**0,25**	**0,012**		**0,30**	**0,55**	**0,25**	**0,060**	**0,050**	**0,080**	**0,025**	**0,0008**	**0,39**	**0,22**
66824		0,08	1,08	0,021	0,003	0,22	0,007	0,020	0,27	0,16	0,12	0,020	0,002	0,050	0,001	0,0006	0,33	0,17
66825		0,07	1,07	0,022	0,003	0,20	0,007	0,023	0,27	0,15	0,12	0,020	0,002	0,040	0,001	0,0005	0,31	0,16
80050		0,08	1,10	0,018	0,001	0,21	0,008	0,020	0,28	0,16	0,11	0,019	0,002	0,050	0,001	0,0005	0,33	0,17
80369		0,08	1,09	0,019	0,004	0,21	0,008	0,016	0,28	0,12	0,12	0,024	0,000	0,030	0,001	0,0002	0,32	0,17

Heat nr	Test nr	Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	E/R	Charpy impact test C40 KV450 Position	mm	UNAGED °C	J 1	2	3	M
B07	C00	C11	C12	C13		C01	C02	C41 C03	C42			C43
Min		**355**	**470**	**22,00**		**FL.1/3**	**L**	**-50**	**35**		**50**	
Max			**630**		**0,87**							
66824	E00600WR047	464	563	23,41	0,82	FL.1/3	L	-50	302	173	188	221
66825	E00600WR067	494	582	22,29	0,85	FL.1/3	L	-50	179	176	202	186
80050	E00400BC061	473	564	23,53	0,84	FL.1/3	L	-50	206	144	230	193
80369	E00700CS039	469	561	24,94	0,84	FL.1/3	L	-50	112	156	122	130
80369	E00600WR048	478	569	22,43	0,84	FL.1/3	L	-50	149	176	186	170

Dal Magro Damien
Porteur de signature spéciale

Z03

DNV SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT 1864
1/12/2024

Z04
CE 0769 08

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr R5000157473

A03

A08 Our reference : 1100689182
A07 Your reference : 6923 REV 0
18.12.2023
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

A06

S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX

B02

Inspection report according to EN 10204:2004 / 3.2

A02

Heat nr B07	Product analysis (%)																
	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
Min		**1,00**			**0,14**												
Max	**0,14**	**1,65**	**0,025**	**0,015**	**0,25**	**0,012**		**0,30**	**0,55**	**0,25**	**0,060**	**0,050**	**0,080**	**0,025**	**0,0008**	**0,39**	**0,23**
66824	0,09	1,08	0,021	0,004	0,22	0,009	0,020	0,27	0,17	0,14	0,024	0,000	0,044	0,002	0,0002	0,34	0,18
66825	0,08	1,06	0,021	0,004	0,21	0,012	0,029	0,27	0,16	0,14	0,023	0,000	0,038	0,002	0,0002	0,33	0,17
80050	0,08	1,12	0,016	0,002	0,23	0,011	0,019	0,27	0,15	0,13	0,022	0,001	0,052	0,001	0,0002	0,34	0,17
80369	0,09	1,10	0,019	0,004	0,21	0,009	0,027	0,29	0,13	0,09	0,027	0,000	0,029	0,002	0,0002	0,33	0,18
80369	0,10	1,11	0,021	0,005	0,21	0,010	0,018	0,29	0,12	0,11	0,025	0,000	0,027	0,001	0,0002	0,34	0,19

Heat nr B07	Prescriptions Min	Prescriptions Max	Complementary heat analysis (%)	
66824		**0,060**	0,022	Nb + V
66824		**0,080**	0,023	Nb + V + Ti
66825		**0,060**	0,022	Nb + V
66825		**0,080**	0,023	Nb + V + Ti
80050		**0,060**	0,021	Nb + V
80050		**0,080**	0,022	Nb + V + Ti
80369		**0,060**	0,024	Nb + V
80369		**0,080**	0,025	Nb + V + Ti

Heat nr B07	Prescriptions Min	Prescriptions Max	Complementary product analysis (%)	
66824		**0,060**	0,024	Nb + V
66824		**0,080**	0,025	Nb + V + Ti
66825		**0,060**	0,023	Nb + V
66825		**0,080**	0,024	Nb + V + Ti
80050		**0,060**	0,023	Nb + V
80050		**0,080**	0,024	Nb + V + Ti
80369		**0,060**	0,027	Nb + V
80369		**0,080**	0,028	Nb + V + Ti
80369		**0,060**	0,025	Nb + V
80369		**0,080**	0,026	Nb + V + Ti

Dal Magro Damien
Porteur de signature spéciale

Z03

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

1/12/2024

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
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Postbus 55208
NL-3008 EE ROTTERDAM

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Site de Differdange
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ArcelorMittal

A05
Mill Test Certificate NrR5000157473

A03

A08 Our reference : 1100689182

A07 Your reference : 6923 REV 0
18.12.2023
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX

B02

Inspection report according to EN 10204:2004 / 3.2

A02

A06

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN
Chemical & mechanical properties compliant also with S355MLO
EN 10225-2:2019 and MDS Y26 NORSOK:2021
FULLY KILLED AND FINE GRAINED STEEL, PRODUCED BY ELECTRIC ARC FURNACE
The Steel is vacuum degassed & /or ladle refined
Surface condition according to EN 10163-3: 2004, class C, subclass 3

Dal Magro Damien
Porteur de signature spéciale

Z03

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

1/12/2024

Z04

CE 0769 08

UKCA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

☐ EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrR5000157473

A03

A08 Our reference : 1100689182
A07 Your reference : 6923 REV 0
18.12.2023
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX

B02

Inspection report according to EN 10204:2004 / 3.2

A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	11.800 mm	12,366 to	80368	12,366 to		4

Heat analysis (%)

B07		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
	Min		1,00			0,14												
	Max	0,14	1,65	0,025	0,015	0,25	0,012		0,30	0,55	0,25	0,060	0,050	0,080	0,025	0,0008	0,39	0,22
80368		0,07	1,11	0,018	0,003	0,21	0,008	0,028	0,29	0,12	0,09	0,027	0,000	0,030	0,001	0,0001	0,31	0,16

Heat nr	Test nr	Tensile test				Charpy impact test						
		N/mm2	N/mm2	5,65VS		C40 KV450		UNAGED			J	
		ReH	Rm	A(%)	E/R	Position	mm	°C	1	2	3	M
B07	C00	C11	C12	C13		C01	C02	C41	C03	C42		C43
Min		345	470	22,00		FL.1/3	L		-50		35	50
Max			630		0,87							
80368	E00800ER042	488	571	24,29	0,85	FL.1/3	L		-50	154	176	217	182

Product analysis (%)

B07		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
	Min		1,00			0,14												
	Max	0,14	1,65	0,025	0,015	0,25	0,012		0,30	0,55	0,25	0,060	0,050	0,080	0,025	0,0008	0,39	0,23
80368		0,07	1,11	0,017	0,003	0,21	0,008	0,028	0,29	0,12	0,09	0,027	0,000	0,030	0,001	0,0001	0,31	0,16

Heat nr B07	Prescriptions Min	Max	Complementary heat analysis (%)	
80368		**0,060**	0,027	Nb + V
80368		**0,080**	0,028	Nb + V + Ti

Heat nr B07	Prescriptions Min	Max	Complementary product analysis (%)	
80368		**0,060**	0,027	Nb + V

Dal Magro Damien
Porteur de signature spéciale

Z03

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

1/12/2024

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrR5000157473

A03

A08 Our reference : 1100689182
A07 Your reference : 6923 REV 0
18.12.2023
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

A06

S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX

B02
Inspection report according to EN 10204:2004 / 3.2

A02

Heat nr B07	Prescriptions Min	Max	Complementary product analysis (%)	
80368		**0,080**	0,028	Nb + V + Ti

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN
Chemical & mechanical properties compliant also with S355MLO
EN 10225-2:2019 and MDS Y26 NORSOK:2021
FULLY KILLED AND FINE GRAINED STEEL, PRODUCED BY ELECTRIC ARC FURNACE
The Steel is vacuum degassed & /or ladle refined
Surface condition according to EN 10163-3: 2004, class C, subclass 3

Dal Magro Damien
Porteur de signature spéciale

Z03

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

1/12/2024

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr R5000160840
A03

A08 Our reference : 1100694631
A07 Your reference : 6942 REV 0
04.03.2024
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

by S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX+ MDS Y26
NORSOK : 2021
B02

Inspection report according to EN 10204:2004 / 3.2
A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 600 B	12.000 mm	38,160 to	81385	20,352 to		8
				81387	17,808 to		7

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
Min		**1,00**			**0,14**												
Max	**0,14**	**1,65**	**0,025**	**0,015**	**0,25**	**0,012**		**0,30**	**0,55**	**0,25**	**0,060**	**0,050**	**0,080**	**0,025**	**0,0008**	**0,39**	**0,22**
81385	0,08	1,37	0,016	0,003	0,21	0,007	0,019	0,23	0,13	0,09	0,056	0,001	0,030	0,001	0,0003	0,37	0,18
81387	0,08	1,11	0,016	0,004	0,20	0,005	0,019	0,22	0,14	0,08	0,019	0,001	0,030	0,001	0,0003	0,31	0,16

B07 Heat nr	C00 Test nr	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	E/R	Charpy impact test C40 KV450 Position C01	C02	UNAGED mm C41	°C C03	J 1 C42	2	3	M C43
Min		**355**	**470**	**22,00**		**FL.1/3**	**L**		**-50**		**35**		**50**
Max			**630**		**0,87**								
81385	E00600WW016	404	524	36,26	0,77	FL.1/3	L		-50	234	255	233	241
81387	E00600WW017	463	560	29,79	0,83	FL.1/3	L		-50	204	259	273	245

Product analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	PCM
Min		**1,00**			**0,14**												
Max	**0,14**	**1,65**	**0,025**	**0,015**	**0,25**	**0,012**		**0,30**	**0,55**	**0,25**	**0,060**	**0,050**	**0,080**	**0,025**	**0,0008**	**0,39**	**0,23**
81385	0,09	1,33	0,020	0,005	0,21	0,009	0,033	0,25	0,15	0,12	0,055	0,000	0,036	0,001	0,0003	0,38	0,19
81387	0,08	1,07	0,014	0,003	0,21	0,007	0,018	0,22	0,14	0,10	0,022	0,000	0,030	0,001	0,0002	0,31	0,16

B07 Heat nr	Prescriptions Min	Max		Complementary heat analysis (%)
81385		**0,060**	0,057	Nb + V
81385		**0,080**	0,058	Nb + V + Ti

Dal Magro Damien
Porteur de signature spéciale
Z03

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT
11/4/2024

Z04 CE 0769 06

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr R5000160840

A03

A08 Our reference : 1100694631
A07 Your reference : 6942 REV 0
04.03.2024
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

by S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX+ MDS Y26 NORSOK : 2021

B02 **Inspection report according to EN 10204:2004 / 3.2**

A02

A06

Heat nr B07	Prescriptions Min	Max	Complementary heat analysis (%)	
81387		**0,060**	0,020	Nb + V
81387		**0,080**	0,021	Nb + V + Ti

Heat nr B07	Prescriptions Min	Max	Complementary product analysis (%)	
81385		**0,060**	0,055	Nb + V
81385		**0,080**	0,056	Nb + V + Ti
81387		**0,060**	0,022	Nb + V
81387		**0,080**	0,023	Nb + V + Ti

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN
Chemical & mechanical properties compliant also with S355MLO
EN 10225-2:2019 and MDS Y26 NORSOK:2021
FULLY KILLED AND FINE GRAINED STEEL, PRODUCED BY ELECTRIC ARC FURNACE
The Steel is vacuum degassed & /or ladle refined

Dal Magro Damien
Porteur de signature spéciale

Z03

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

11/4/2024

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Netherlands B.V.
Postbus 55208
NL-3008 EE ROTTERDAM

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate Nr R5000160840

A03

A08 Our reference : 1100694631

A07 Your reference : 6942 REV 0
04.03.2024
KROEGER STAAL BV

KROEGER STAAL BV
OOSTELIJKE RANDWEG 40
NL-4782 PZ MOERDIJK

A06

by S355ML according to EN10025-4:2019/S355MLO according to EN10225-2 WITH PCM = 0,23% MAX+ MDS Y26
NORSOK : 2021

B02

Inspection report according to EN 10204:2004 / 3.2

A02

Surface condition according to EN 10163-3: 2004, class C, subclass 3

Dal Magro Damien
Porteur de signature spéciale

Z03

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

11/4/2024

Z04

CE 0769 08

UK CA 0038 21

Code of the product type: 1.8834 / DOP: AMDI-4/04-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1724000667	122A70	Q012400385

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 06.06.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220831-FPQ8IS-0009A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
PO No. : 220810-FC
Supplier : SAMSUNG C&T CORPORATION
Commodity : PRIME HOT ROLLED STEEL PLATE
Customer : .
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 °C Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)
30x3000x12000	PK00571001	1	8,478	SK83553	T	390	528	32	1: 238 2: 264 3: 230 A: 244	L P	0.1530 0.1667	0.201 0.202	1.546 1.556	0.0124 0.0125	0.0026 0.0034	0.012 0.012	0.006 0.006	2 1	0.014 0.012	0.002 0.002	27 36	0.028 0.029	0.0117 0.0119	0.005 0.005
30x3000x12000	PK00571201	1	8,478	SK83553	T	390	528	32	1: 238 2: 264 3: 230 A: 244	L P	0.1530 0.1667	0.201 0.202	1.546 1.556	0.0124 0.0125	0.0026 0.0034	0.012 0.012	0.006 0.006	2 1	0.014 0.012	0.002 0.002	27 36	0.028 0.029	0.0117 0.0119	0.005 0.005
30x3000x12000	PK00571301	1	8,478	SK83553	T	390	528	32	1: 238 2: 264 3: 230 A: 244	L P	0.1530 0.1667	0.201 0.202	1.546 1.556	0.0124 0.0125	0.0026 0.0034	0.012 0.012	0.006 0.006	2 1	0.014 0.012	0.002 0.002	27 36	0.028 0.029	0.0117 0.0119	0.005 0.005
30x3000x12000	PK00570601	1	8,478	SK83553	T	389	528	32	1: 234 2: 277 3: 245 A: 252	L P	0.1530 0.1667	0.201 0.202	1.546 1.556	0.0124 0.0125	0.0026 0.0034	0.012 0.012	0.006 0.006	2 1	0.014 0.012	0.002 0.002	27 36	0.028 0.029	0.0117 0.0119	0.005 0.005
30x3000x12000	PK00570901	1	8,478	SK83553	T	389	528	32	1: 234 2: 277 3: 245 A: 252	L P	0.1530 0.1667	0.201 0.202	1.546 1.556	0.0124 0.0125	0.0026 0.0034	0.012 0.012	0.006 0.006	2 1	0.014 0.012	0.002 0.002	27 36	0.028 0.029	0.0117 0.0119	0.005 0.005
*** Sub Total (010) ***		12	101,736 (kg)																					
*** Heat Treatment ===> Controlled rolling ***																								
*** Grade Total ***		12	101,736 (kg)																					
*** Grand Total ***		12	101,736 (kg)																					

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 mmX10 mm
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part 2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220831-FPQ8IS-0009A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
PO No. : 220810-FC
Supplier : SAMSUNG C&T CORPORATION
Commodity : PRIME HOT ROLLED STEEL PLATE
Customer : .
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	Sol-Al (%)	Total-Al (%)	CEQ (%)		
PK00571001	L	0.048	0.049	0.42		
	P	0.049	0.049			
PK00571201	L	0.048	0.049	0.42		
	P	0.049	0.049			
PK00571301	L	0.048	0.049	0.42		
	P	0.049	0.049			
PK00570601	L	0.048	0.049	0.42		
	P	0.049	0.049			
PK00570901	L	0.048	0.049	0.42		
	P	0.049	0.049			
*** Sub Total (010) ***				12	101,736 (kg)	
*** Grade Total ***				12	101,736 (kg)	
*** Grand Total ***				12	101,736 (kg)	

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU
and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part 2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1724000667	123A40D	Q012400229

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220906-FPQ8IS-0001A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
Supplier : SAMSUNG C&T CORPORATION
Customer : .

PO No. : 220810-FC
Commodity : PRIME HOT ROLLED STEEL PLATE
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	Sol-Al (%)	Total-Al (%)	CEQ (%)		
PK00983901	L	0.039	0.039	0.41		
	P	0.037	0.038			
*** Sub Total (120) ***				1	14,130 (kg)	
*** Grade Total ***				1	14,130 (kg)	
*** Grand Total ***				4	56,520 (kg)	

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU
and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part 2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

FRANCHINI LAMIERE DDT Nr. 2277 del 11/04/2024__233713__PK009839-0
5745401818166510667 6
무성철강(주) 2022-10-07 10:37:56
1513/ 3402

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220906-FPQ8IS-0001A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
PO No. : 220810-FC
Supplier : SAMSUNG C&T CORPORATION
Commodity : PRIME HOT ROLLED STEEL PLATE
Customer : .
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)
50x3000x12000	PK00983901	1	14,130	SK83637	T	370	517	28	1: 172 2: 193 3: 200 A: 188	L	0.1505	0.200	1.477	0.0126	0.0032	0.012	0.005	2	0.011	0.002	24	0.043	0.0119	0.043
										P	0.1622	0.202	1.501	0.0126	0.0039	0.012	0.005	1	0.011	0.002	47	0.045	0.0128	0.046
*** Sub Total (120) ***		1	14,130 (kg)																					
*** Heat Treatment ===> Controlled rolling ***																								
*** Grade Total ***		1	14,130 (kg)																					
*** Grand Total ***		4	56,520 (kg)																					

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

1) 233713

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part 2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

FRANCHINI LAMIERE DDT Nr. 2277 del 11/04/2024__233713__PK009839-0
유성품질(검토)2022-10-07 10:37:56
1514/ 3402

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220906-FPQ8IS-0001A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
PO No. : 220810-FC
Supplier : SAMSUNG C&T CORPORATION
Commodity : PRIME HOT ROLLED STEEL PLATE
Customer : .
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)
50x3000x12000	PK00983901 1	1	14,130	SK83637	T	370	517	28	1: 172 2: 193 3: 200 A: 188	L	0.1505	0.200	1.477	0.0126	0.0032	0.012	0.005	2	0.011	0.002	24	0.043	0.0119	0.043
										P	0.1622	0.202	1.501	0.0126	0.0039	0.012	0.005	1	0.011	0.002	47	0.045	0.0128	0.046
*** Sub Total (120) ***		1	14,130 (kg)																					
*** Heat Treatment ===> Controlled rolling ***																								
*** Grade Total ***		1	14,130 (kg)																					
*** Grand Total ***		4	56,520 (kg)																					

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

1) 233713

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part-2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

FRANCHINI LAMIERE DDT Nr. 2277 del 11/04/2024__233713__PK009839-0

5746401818165106676

품질품연(품연)2022-10-07 10:37:55

1515/ 3402

KRAKATAU POSCO

Mill Test Certificate

Certificate No. : 220906-FPQ8IS-0001A2-0002
Date of Issue : Sep., 19, 2022

Order No. : Q8S1027039
Supplier : SAMSUNG C&T CORPORATION
Customer : .

PO No. : 220810-FC
Commodity : PRIME HOT ROLLED STEEL PLATE
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	Sol-Al (%)	Total-Al (%)	CEQ (%)		
PK00983901	L	0.039	0.039	0.41		
	P	0.037	0.038			
*** Sub Total (120) ***				1	14,130 (kg)	
*** Grade Total ***				1	14,130 (kg)	
*** Grand Total ***				4	56,520 (kg)	

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

=== Last Item ===

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with PED2014/68/EU
and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).
Thickness Tolerance Standard EN 10029 Class B Part 1,
Length and Width Tolerance dimension according to EN10029 Part 2 and 3.
Flatness tolerance dimension according to EN10029 Class N part 4.
Surface Condition Standard EN10163-2 Class A.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 14 0035-CPR-A258

Surveyor To :

KP001 Choi Jong Seog

PT.KRAKATAU POSCO Jl. Afrika, No. 2, Kawasan Industri Krakatau Cilegon, Banten, 42443, Indonesia

<PAGE : 4>

Testing and Inspection Team Leader CHOI JONG-SEOG

5746401818166510667 6

2022-10-07 10:37:56

FRANCHINI LAMIERE DDT Nr. 2277 del 11/04/2024__233713__PK009839-0

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	**1724000805**	**122A70C**	**Q012400260**

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **24.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 2520 del 19/04/2024__P2978D__195/7061

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02 — N° 730/0293367 — Page 1 / FIN — A09/A03

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINIMND 27 J MINIMOY (5)
B03

2DC: Uniforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalization rolling
T : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionnel / Stress relieving
R : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-010 A07	GH31012011 000010 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04 Traitement de référence / Treatment of test samples : BL B05

Identification du produit / Product identification		Poste / Item	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight (kg) (7)	Emplacement / Location (2)	Traction / Tensile requirements											Emplacement / Location (2)	Résilience / Impact testing							
Repère pièce / Plate number	Coulée / Heat			Epaisseur / Thickness	Largeur / Width	Longueur / Length			S (3)	Pos. Z(4)	Type	Réf / Ref (5)	Temp.	ReEH	Rm	A%					Réf / Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C05	C10		C03	C11	C12	C13	<-C14-C29			C60-C69->	C01	C40	C02	C08	C52	<-	-C42-	->	C43
1957061	730324439	001	1	6,000	2000,00		25101	1	T	P	PRISM	BL	20	499	595	23,8					1	BL	KV	L	-20	P	100	109	107	105

N.S. N. MATRICOLA P2978

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,25 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0097 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CEN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CEN02				%		
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97		
O/YCC		730324439	0,183	1,466	0,015	0,004	0,012	0,031	0,0001	0,022	0,018	0,003	0,0032	0,013	0,015	0,013	0,001				0,43	0,050						

OTHER ELEMENTS ARE AS TRACES ONLY

(1) Emplacement/Location(2): 1 Tête/ Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C52
(6) Mode élab./Meth. Coulée: T:Thomas/ M: Martin; E: Electrique / Electric; OY: Oxy.pur / Basic oxyg.; CC: Coulée Continue / Continuous casting — C70/93
(7) Masse et nb pièces : si Brut indicatif : Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date: 13/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

258

ARCELORMITTAL MEDITERRANEE
13276 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-010	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957061	730324439	000010	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability Steel Expressed as indicated in the DoP

FRANCHINI LAMIERE DDT Nr. 2520 del 19/04/2024__P2978D__1957061

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1724000805	122A70C	Q012400258

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **24.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Product No.	CE 2814	POSCO Co., Ltd - Pohan 6262, Donghaean-ro, Nam-gu, Pohang-si, Gye 09 2814/CPR/0038/CPR/M U M
PB90534101-4105 PB90533801-3805 PB90534401-4405 PB90535501-5505 PB90535701-5705 PB90535601-5605	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** **Impact strength :** **Weldability :** **Durability :** Dangerous Substances : No Perfor

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

FRANCHINI LAMIERE DDT Nr. 2518 del 19/04/2024__256545

Product No.	Division	V (%)	Sol-Al (%)	CEQ (%)
PB90534101-4105	L	0.002	0.037	0.40
	P	0.002	0.035	
PB90533801-3805	L	0.002	0.037	0.40
	P	0.002	0.035	
PB90534401-4405	L	0.002	0.037	0.40
	P	0.002	0.035	
PB90535501-5505	L	0.002	0.037	0.40
	P	0.002	0.035	
PB90535701-5705	L	0.002	0.037	0.40
	P	0.002	0.035	
PB90535601-5605	L	0.002	0.037	0.40
	P	0.002	0.035	

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This materia
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued accordir
We, POSCO, hereby certify that the products specified in the present MTC have be
South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the or

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

1522/ 3402

FRANCHINI LAMIERE DDT Nr. 2518 del 19/04/2024__256545

Size	Product No.	Quantity	Weight (kg)	Heat No.	Country of Melt & Pour	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)	Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)
15x2500x12000	PB90534101-4105	5	17,670	SB94829	KOR	T	437	547	29	1: 234 2: 319 3: 319 A: 291	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017
15x2500x12000	PB90533801-3805	5	17,670	SB94829	KOR	T	429	545	30	1: 278 2: 263 3: 304 A: 282	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017
15x2500x12000	PB90534401-4405	5	17,670	SB94829	KOR	T	429	545	30	1: 278 2: 263 3: 304 A: 282	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017
15x2500x12000	PB90535501-5505	5	17,670	SB94829	KOR	T	424	545	32	1: 287 2: 294 3: 287 A: 289	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017
15x2500x12000	PB90535701-5705	5	17,670	SB94829	KOR	T	424	545	32	1: 287 2: 294 3: 287 A: 289	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017
15x2500x12000	PB90535601-5605	5	17,670	SB94829	KOR	T	424	549	30	1: 255 2: 274 3: 236 A: 255	L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017

7| 256548

4| 256546 5| 256547

2| 256544 3| 256545 6| 256548

1| 256542

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This materia
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued accordi
We, POSCO, hereby certify that the products specified in the present MTC have be
South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the o

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

FRANCHINI LAMIERE DDT Nr. 2518 del 19/04/2024__256545

Mill Test Certificate

Certificate No. : 240112-FP01PS-0028A1-0021
Date of Issue : Jan., 30, 2024

Order No. : 01S6499076
PO No. : FNC231110
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Size	Product No.	Quantity	Weight (kg)	Heat No.	Country of Melt & Pour	Position	Tensile Test YP (N/㎟)	Tensile Test TS (N/㎟)	Tensile Test EL (%)	Impact Test V Notch -20 ℃ Energy (Joule)		Division	Chemical Composition C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)
12x2500x6000	PB90907301-7310	10	14,130	SB95534	KOR	T	431	553	30	1: 315 2: 195 3: 240 A: 250		L P	0.1500 0.1504	0.356 0.354	1.396 1.400	0.0098 0.0098	0.0028 0.0032	0.040 0.034	0.016 0.016	0 0	0.022 0.022	0.006 0.007	44 41	0.024 0.024	0.0112 0.0115
*** Sub Total (010) ***		10	14,130 (kg)																						
*** Heat Treatment ===> Normalizing rolling ***													CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5												
15x2500x12000	PB90916401	1	3,534	SB94829	KOR	T	424	549	30	1: 255 2: 274 3: 236 A: 255		L P	0.1540 0.1482	0.344 0.357	1.396 1.375	0.0096 0.0090	0.0024 0.0021	0.034 0.036	0.016 0.017	0 1	0.024 0.022	0.004 0.005	38 37	0.023 0.024	0.0122 0.0115
*** Sub Total (060) ***		1	3,534 (kg)																						
*** Heat Treatment ===> Normalizing rolling ***													CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5												
15x3000x12000	PB90706401	1	4,241	SB95118	KOR	T	433	556	29	1: 232 2: 259 3: 219 A: 237		L P	0.1551 0.1519	0.328 0.342	1.416 1.423	0.0078 0.0081	0.0024 0.0021	0.026 0.024	0.010 0.011	0 0	0.011 0.012	0.003 0.010	27 32	0.024 0.023	0.0128 0.0124
*** Sub Total (070) ***		1	4,241 (kg)																						
*** Heat Treatment ===> Normalizing rolling ***													CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5												

CE EN10025-2 S355J2
2814

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular), YP Method : Upper Point
* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 ㎜X10 ㎜
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

POSCO Pohang Works, 6262, Donghaean-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, 37877, Korea

Chief of material testing section Kim, Byung Suok

posco

Mill Test Certificate

Certificate No. : 240112-FP01PS-0028A1-0021
Date of Issue : Jan., 30, 2024

Order No. : 01S6499076
PO No. : FNC231110
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Product No.	Division	V (%)	Sol-Al (%)	CEQ (%)		
PB90907301-7310	L	0.003	0.038	0.40		
	P	0.002	0.035			
*** Sub Total (010)	***			10	14,130 (kg)	
						CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PB90916401	L	0.002	0.037	0.40		
	P	0.002	0.035			
*** Sub Total (060)	***			1	3,534 (kg)	
						CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PB90706401	L	0.002	0.035	0.40		
	P	0.002	0.036			
*** Sub Total (070)	***			1	4,241 (kg)	
						CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CE EN10025-2 S355J2
2814

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We, POSCO, hereby certify that the products specified in the present MTC have been fully processed in South Korea. (Facility and address information is stated below)
We hereby certify that the material herein has been made in accordance with the order and above specification.

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim 1525/3402

posco

CE marking information

Certificate No. : 240112-FP01PS-0028A1-0021
Date of Issue : Jan., 30, 2024

Order No. : 01S6499076
PO No. : FNC231110
Supplier : POSCO INTERNATIONAL CORPORATION
Commodity : HOT ROLLED PLATE
Customer : FRANCHINI LAMIERE
Spec & Type : EN10025-2 S355J2+N

Product No.	CE 2814	POSCO Co., Ltd - Pohang Works 6262, Donghaean-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, 37877, Korea 09 2814/CPR/0038/CPR/M U M/0910016/1
PB90907301-7310 PB90916401 PB90706401	**EN 10025-1:2004** **Types S355J2** To be used in construction structural steels Tolerances on dimensions and shape :EN 10029	**Elongation :** **Tensile strength :** **Yield strength :** **Impact strength :** **Weldability :** **Durability :** : **EN10025-2** Dangerous Substances : No Performance Determind

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

B. S. Kim

1526/3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1724000846	123A90A	Q012400264

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma / MTSMD Signature — Data / Date: **24.04.2024**

Ancarani Paolo

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EUROPE STEEL CENTER
Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132599
Our reference: L. Barelds
Your Po nr: PO 172400846
Your VAT Nr: P.IVA 00082100397

Enquiry Reference: RFQ TRANSITION PIECE PLATES BALANCE
Offer Reference: ESP1804LBrev00

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no	Plate no	MTC	HS CODE	C.o.O.
1	Plates		12000	2051	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	402,51	4.830,1	764342	246599-2	73581	72085120	Voest Alpine Austria
1	Plates		12000	2051	25	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	402,51	4.830,1	764342	246601-21	73581	72085120	Voest Alpine Austria
								2					**9.660,21**					

73581

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4FV-4

Z02 Date 14-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378558/C**	**A08 Order-No.:**	**4500121**	**A07 OrderDat.**	04-01-2024	**Date of dispatch**	14-03-2024 400D

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6926

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO NORSOK MDS Y40

B03 Standard EN 10225-1 : 2019

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
763206	**242756/1**	160	50,00	2500,0	12000	1		12.003	42848	S460MLOVAS
763206	**242757/1**	160	50,00	2500,0	12000	1		12.022	42848	S460MLOVAS
763212	**244684/1**	170	50,00	3000,0	12000	1		14.407	42848	S460MLOVAS
764342	**245825/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**245825/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245827/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245827/2**	50	25,00	2500,0	12000	1		6.014	42845	S460MLOVAS
764342	**245829/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**245829/1**	50	25,00	2500,0	12000	1		6.014	42845	S460MLOVAS
764342	**245831/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245831/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**246598/21**	40	25,00	2051,0	12000	1		4.936	42845	S460MLOVAS

Augsburg, 2024-03-15

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Surveyor

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
764342	246598/11	40	25,00	2051,0	12000	1		4.934	42845	S460MLOVAS
764342	246599/2	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246599/1	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246600/11	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246600/21	40	25,00	2051,0	12000	1		4.916	42845	S460MLOVAS
764342	246601/21	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246601/11	40	25,00	2051,0	12000	1		4.918	42845	S460MLOVAS
764345	245819/1	70	25,00	3050,0	12000	1		7.328	42846	S460MLOVAS
764345	245821/1	70	25,00	3050,0	12000	1		7.330	42846	S460MLOVAS
764345	245823/1	70	25,00	3050,0	12000	1		7.328	42846	S460MLOVAS
764345	245824/1	70	25,00	3050,0	12000	1		7.333	42846	S460MLOVAS
764345	245826/1	70	25,00	3050,0	12000	1		7.332	42846	S460MLOVAS
764345	245828/1	70	25,00	3050,0	12000	1		7.329	42846	S460MLOVAS
764349	243148/21	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243148/11	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243149/1	10	8,00	2051,0	12000	1		1.593	42845	S460MLOVAS
764349	243149/2	10	8,00	2051,0	12000	1		1.593	42845	S460MLOVAS
764349	243150/1	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243150/2	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243151/2	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243151/1	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	245669/1	80	30,00	2500,0	12000	1		7.145	42846	S460MLOVAS
764349	247822/1	80	30,00	2500,0	12000	1		7.151	42846	S460MLOVAS
764349	247823/1	60	25,00	2500,0	16000	1		8.013	42846	S460MLOVAS
764349	247825/1	60	25,00	2500,0	16000	1		8.020	42846	S460MLOVAS
764349	251234/1	80	30,00	2500,0	12000	1		7.149	42846	S460MLOVAS
868783	245817/1	60	25,00	2500,0	16000	1		7.978	42846	S460MLOVAS
868783	245822/1	60	25,00	2500,0	16000	1		8.010	42846	S460MLOVAS
954831	241335/1	170	50,00	3000,0	12000	1		14.457	42848	S460MLOVAS
954834	248945/1	160	50,00	2500,0	12000	1		12.065	42848	S460MLOVAS
954835	241337/1	150	50,00	2051,0	12000	1		9.900	42848	S460MLOVAS
954835	241338/1	150	50,00	2051,0	12000	1		9.884	42848	S460MLOVAS
954835	244691/1	50	25,00	2500,0	12000	1		6.012	42846	S460MLOVAS
954835	244691/2	50	25,00	2500,0	12000	1		6.013	42846	S460MLOVAS

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Surveyor

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
956703	242754/1	160	50,00	2500,0	12000	1		11.977	42848	S460MLOVAS
956703	242755/1	160	50,00	2500,0	12000	1		12.069	42848	S460MLOVAS
957237	242752/1	170	50,00	3000,0	12000	1		14.402	42848	S460MLOVAS
958047	244739/1	30	12,00	2051,0	12000	1		2.369	42845	S460MLOVAS
958047	244739/2	30	12,00	2051,0	12000	1		2.369	42845	S460MLOVAS
958047	244740/21	30	12,00	2051,0	12000	1		2.370	42845	S460MLOVAS
958047	244740/11	30	12,00	2051,0	12000	1		2.373	42845	S460MLOVAS
958047	245805/1	80	30,00	2500,0	12000	1		7.148	42846	S460MLOVAS
958047	245807/1	80	30,00	2500,0	12000	1		7.146	42846	S460MLOVAS
958047	245810/1	80	30,00	2500,0	12000	1		7.146	42846	S460MLOVAS
958047	250573/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250574/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250574/2	20	10,00	2051,0	12000	1		1.981	42845	S460MLOVAS
958047	250575/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250576/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250576/2	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
	Sum					**62**		**375.694**		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
	>=		.150				.015															
Set values	<=	.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.41
764349		.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
958047		.034	.319	1.610	.005	.0008	.038	.163	.170	.004	.160	.003	.037	.012	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.36
	>=		.150				.015															
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.41
763206		.033	.338	1.620	.005	.0008	.043	.176	.170	.003	.158	.004	.039	.012	.0045	.0002	.0020	.0017	.0020	.0020	.0020	.36
763212		.031	.329	1.620	.007	.0004	.035	.187	.170	.006	.160	.004	.035	.010	.0057	.0002	.0020	.0016	.0030	.0020	.0020	.36
764342		.027	.345	1.620	.007	.0009	.032	.174	.170	.010	.166	.004	.037	.014	.0048	.0002	.0020	.0014	.0020	.0020	.0020	.36
764345		.032	.343	1.650	.011	.0015	.042	.168	.170	.004	.160	.004	.037	.012	.0051	.0002	.0020	.0008	.0020	.0020	.0020	.36
764349		.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
868783		.027	.336	1.620	.007	.0013	.034	.184	.170	.007	.168	.003	.037	.012	.0057	.0002	.0020	.0014	.0020	.0020	.0020	.36
954831		.030	.315	1.600	.006	.0006	.038	.168	.170	.008	.160	.004	.037	.014	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.35
954834		.031	.338	1.640	.008	.0008	.036	.180	.170	.007	.164	.004	.036	.014	.0062	.0002	.0020	.0022	.0020	.0020	.0020	.36
954835		.029	.330	1.650	.007	.0010	.038	.186	.170	.009	.160	.005	.036	.013	.0058	.0003	.0030	.0017	.0020	.0020	.0020	.37
956703		.026	.350	1.640	.008	.0011	.040	.184	.180	.009	.165	.006	.036	.013	.0067	.0002	.0020	.0025	.0020	.0020	.0020	.36
957237		.032	.344	1.630	.007	.0010	.046	.179	.170	.005	.163	.006	.036	.013	.0047	.0002	.0020	.0018	.0020	.0020	.0020	.36
958047		.034	.319	1.610	.005	.0008	.038	.163	.170	.004	.160	.003	.037	.012	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.36

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	LF03 %
>= Set values <=	.23	.090	.110	.900
764349	.16	.039	.052	.474
958047	.15	.040	.052	.497
>= Set values <=	.22	.090	.110	.900
763206	.15	.043	.055	.507
763212	.14	.039	.049	.523
764342	.14	.041	.055	.520
764345	.15	.041	.053	.502
764349	.16	.039	.052	.474
868783	.14	.040	.052	.529
954831	.14	.041	.055	.506
954834	.15	.040	.054	.521
954835	.15	.041	.054	.525
956703	.14	.042	.055	.538
957237	.15	.042	.055	.517
958047	.15	.040	.052	.497

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	550		17.0			
Set values <=							580	700			93.00		
764349	243148	30,0	8.27	F	O	T	537	612	A5	24.8	87.64		
	243150	30,0	8.14	F	O	T	538	618	A5	22.4	87.02		
958047	244740	30,0	12.19	F	O	T	537	600	A5	20.6	89.39		
	250573	30,0	10.50	F	O	T	535	652	A5	19.1	82.09		
	250575	30,0	10.22	F	O	T	523	637	A5	19.8	82.09		
>=							460	550		17.0			
Set values <=							580	700			90.00		
763206	242756	Ø	9.98	F	V	T	516	603	A5	22.5	85.63		
	242756	Ø	9.95	F	V	T	513	599	A5	27.9	85.57	001	1
763212	244684	Ø	10.01	F	V	T	468	579	A5	27.2	80.98		
	244684	Ø	10.00	F	V	T	514	588	A5	26.6	87.39	001	1
764342	245827	30,0	25.33	F	O	T	533	611	A5	20.6	87.25		
	245831	30,0	25.36	F	O	T	536	601	A5	21.0	89.06		
	246598	30,0	25.16	F	O	T	538	602	A5	20.9	89.31		
764345	245819	30,0	25.31	F	O	T	534	634	A5	20.9	84.27		
	245828	30,0	25.18	F	O	T	538	622	A5	20.7	86.53		
764349	245669	30,0	30.19	F	O	T	539	644	A5	20.5	83.74		
	247823	30,0	25.11	F	O	T	536	617	A5	21.0	86.89		
868783	245822	30,0	25.47	F	O	T	539	603	A5	20.9	89.42		
954831	241335	Ø	10.01	F	V	T	491	594	A5	25.8	82.73		
	241335	Ø	9.91	F	V	T	522	601	A5	25.7	86.79	001	1
954834	248945	Ø	9.96	F	V	T	514	597	A5	24.6	86.01		
	248945	Ø	9.99	F	V	T	535	609	A5	25.6	87.83	001	1
954835	241338	Ø	10.00	F	V	T	468	572	A5	29.6	81.75		
	241338	Ø	10.05	F	V	T	509	589	A5	28.9	86.43	001	1
	244691	30,0	25.29	F	O	T	527	591	A5	24.5	89.20		
956703	242753	Ø	9.96	F	V	T	466	567	A5	25.4	82.11		
	242753	Ø	9.99	F	V	T	502	577	A5	26.2	87.15	001	1
957237	242752	Ø	9.96	F	V	T	521	599	A5	26.6	86.90		
	242752	Ø	10.01	F	V	T	526	594	A5	26.8	88.52	001	1
958047	245808	30,0	30.11	F	O	T	538	603	A5	21.3	89.23		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width MM	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	21	21	21	30			
Set values <=													
764349	243150	CV 10x5	F	O	T	-40	109	105	107	107			
>=						-40	32	32	32	45			
Set values <=													
958047	250575	CV 10x7,5	F	O	T	-40	233	236	242	237			
>=						-40	42	42	42	60			
Set values <=													
763206	242756	CV 10x10	F	O	T	-40	317	312	310	313			
	242756	CV 10x10	F	O	T	-40	228	240	267	245	001	1	
	242756	CV 10x10	F	K	T	-40	323	297	319	313			
	242756	CV 10x10	F	K	T	-40	234	257	251	247	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
763212	244684	CV 10x10	F	O	T	-40	376	372	381	376			
	244684	CV 10x10	F	O	T	-40	332	310	313	318	001	1	
	244684	CV 10x10	F	K	T	-40	379	370	380	376			
	244684	CV 10x10	F	K	T	-40	292	297	300	296	001	1	
764342	245827	CV 10x10	F	O	T	-40	335	348	336	340			
	245831	CV 10x10	F	O	T	-40	322	338	327	329			
	246598	CV 10x10	F	O	T	-40	377	367	375	373			
764345	245819	CV 10x10	F	O	T	-40	322	341	323	328			
	245828	CV 10x10	F	O	T	-40	337	327	341	335			
764349	245669	CV 10x10	F	O	T	-40	332	330	322	328			
	247823	CV 10x10	F	O	T	-40	338	346	339	341			
868783	245822	CV 10x10	F	O	T	-40	332	316	336	328			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
954831	241335	CV 10x10	F	O	T	-40	352	372	372	365			
	241335	CV 10x10	F	O	T	-40	179	252	266	232	001	1	
	241335	CV 10x10	F	K	T	-40	360	350	351	354			
	241335	CV 10x10	F	K	T	-40	118	130	228	159	001	1	
954834	248945	CV 10x10	F	O	T	-40	344	348	349	347			
	248945	CV 10x10	F	O	T	-40	278	281	283	281	001	1	
	248945	CV 10x10	F	K	T	-40	345	377	384	368			
	248945	CV 10x10	F	K	T	-40	270	271	73	205	001	1	
954835	241338	CV 10x10	F	O	T	-40	359	364	377	367			
	244691	CV 10x10	F	O	T	-40	326	355	355	345			
	241338	CV 10x10	F	O	T	-40	289	324	309	307	001	1	
	241338	CV 10x10	F	K	T	-40	415	418	421	418			
	241338	CV 10x10	F	K	T	-40	327	317	328	324	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
956703	242753	CV 10x10	F	O	T	-40	317	327	318	321			
	242753	CV 10x10	F	O	T	-40	256	272	267	265	001	1	
	242753	CV 10x10	F	K	T	-40	115	304	308	242			
	242753	CV 10x10	F	K	T	-40	231	194	122	182	001	1	
957237	242752	CV 10x10	F	O	T	-40	338	349	347	344			
	242752	CV 10x10	F	O	T	-40	250	260	316	275	001	1	
	242752	CV 10x10	F	K	T	-40	330	352	346	343			
	242752	CV 10x10	F	K	T	-40	288	291	291	290	001	1	
958047	244740	CV 10x10	F	O	T	-40	370	357	362	363			
	245808	CV 10x10	F	O	T	-40	337	309	310	319			
>= Set values <=						-40	29	29	29	46			
763206	242756	CV 10x10	F	ZB2	T	-40	243	304	296	281			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
763212	244684	CV 10x10	F	ZB2	T	-40	375	384	375	378			strain aged 5%, 60 min. at 250°C
764342	245803	CV 10x10	F	ZB2	T	-40	318	32	316	222			strain aged 5%, 60 min. at 250°C
764345	242446	CV 10x10	F	ZB2	T	-40	294	346	345	328			strain aged 5%, 60 min. at 250°C
764349	245670	CV 10x10	F	ZB2	T	-40	322	321	329	324			strain aged 5%, 60 min. at 250°C
	250043	CV 10x10	F	ZB2	T	-40	280	270	224	258			strain aged 5%, 60 min. at 250°C
868783	244527	CV 10x10	F	ZB2	T	-40	337	333	343	338			strain aged 5%, 60 min. at 250°C
954831	241335	CV 10x10	F	ZB2	T	-40	308	314	311	311			strain aged 5%, 60 min. at 250°C
954834	248945	CV 10x10	F	ZB2	T	-40	337	303	369	336			strain aged 5%, 60 min. at 250°C
954835	241338	CV 10x10	F	ZB2	T	-40	364	352	341	352			strain aged 5%, 60 min. at 250°C
956703	242753	CV 10x10	F	ZB2	T	-40	285	215	307	269			strain aged 5%, 60 min. at 250°C
957237	242752	CV 10x10	F	ZB2	T	-40	138	305	126	189			strain aged 5%, 60 min. at 250°C
958047	243261	CV 10x10	F	ZB2	T	-40	127	119	275	174			strain aged 5%, 60 min. at 250°C

C40;shape:

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43				
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV		Sim.htm	WBH	samp.cond.
						°C	J	J	J	J				

CV 10x10: Test shape , Dimensions
CV 10x7,5: Test shape , Dimensions
CV 10x5: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
763206	242756	F	OS	HV10	221	229	225
763212	244684	F	OS	HV10	239	236	237
764342	245831	F	OS	HV10	211	218	213
764345	245828	F	OS	HV10	212	211	211
764349	245669	F	OS	HV10	222	237	216
868783	245769	F	OS	HV10	213	212	220
954831	241335	F	OS	HV10	213	212	218
954834	248945	F	OS	HV10	223	232	230
954835	241338	F	OS	HV10	252	257	252
956703	242753	F	OS	HV10	238	239	230
957237	242759	F	OS	HV10	225	221	224
958047	244740	F	OS	HV10	203	208	207

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						440	440	440	25	25	25	35
Set values <=												
763206	242756	Ø	9.98	F	S	573	573	571	81	82	79	81
763212	244684	Ø	10.02	F	S	560	559	559	83	79	81	81
764342	245831	Ø	10.01	F	S	583	582	581	82	79	83	81
764345	242446	Ø	9.99	F	S	595	595	596	83	84	83	83
764349	245669	Ø	9.99	F	S	621	617	619	75	77	77	76
868783	245769	Ø	10.01	F	S	584	585	584	84	82	82	83
954831	241335	Ø	9.98	F	S	564	567	564	82	82	84	83
954834	248945	Ø	9.97	F	S	574	574	573	81	83	82	82
954835	241338	Ø	9.92	F	S	570	570	565	84	82	82	83
956703	242753	Ø	9.99	F	S	571	570	570	81	82	81	81
957237	242759	Ø	9.99	F	S	553	552	554	80	80	79	80
958047	244728	Ø	9.99	F	S	583	587	585	82	81	81	81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
764349	245669	.053	.354	1.590	.004	.0009	.040	.168	.170	.004	.159	.004	.036	.013	.0042	.0003	.0020	.0021	.0020	.0020
958047	243261	.033	.335	1.610	.005	.0007	.042	.172	.180	.004	.160	.003	.036	.012	.0051	.0003	.0020	.0022	.0020	.0020
	244728	.033	.328	1.600	.005	.0007	.037	.168	.180	.003	.159	.003	.036	.011	.0044	.0003	.0020	.0018	.0020	.0020
	245805	.034	.333	1.590	.005	.0009	.040	.172	.180	.004	.157	.003	.036	.011	.0052	.0002	.0020	.0023	.0020	.0020
	250574	.035	.333	1.600	.005	.0006	.041	.168	.180	.004	.156	.003	.035	.011	.0048	.0002	.0020	.0020	.0020	.0020
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
763206	242756	.039	.337	1.620	.005	.0014	.040	.192	.170	.004	.158	.004	.039	.012	.0083	.0003	.0020	.0021	.0030	.0020
763212	241340	.031	.321	1.610	.007	.0004	.036	.181	.170	.005	.158	.004	.035	.010	.0050	.0002	.0020	.0016	.0030	.0020
764342	245799	.027	.349	1.620	.007	.0008	.034	.190	.170	.011	.165	.004	.036	.013	.0056	.0002	.0020	.0022	.0020	.0020
	245827	.026	.345	1.610	.007	.0006	.035	.185	.170	.011	.164	.004	.035	.013	.0052	.0002	.0020	.0023	.0020	.0020
	245831	.026	.347	1.620	.007	.0008	.035	.187	.170	.010	.165	.004	.036	.013	.0055	.0002	.0020	.0020	.0020	.0020
	246598	.030	.345	1.630	.007	.0012	.033	.189	.180	.011	.168	.004	.036	.013	.0055	.0003	.0020	.0021	.0020	.0030
764345	245819	.030	.350	1.640	.011	.0014	.044	.185	.180	.005	.159	.004	.036	.012	.0058	.0002	.0020	.0015	.0020	.0020
	245828	.030	.350	1.640	.011	.0013	.045	.184	.180	.005	.158	.004	.036	.012	.0061	.0002	.0020	.0015	.0020	.0020
764349	245669	.053	.354	1.590	.004	.0009	.040	.168	.170	.004	.159	.004	.036	.013	.0042	.0003	.0020	.0021	.0020	.0020
	247825	.055	.354	1.600	.004	.0008	.039	.169	.170	.004	.160	.004	.036	.013	.0038	.0003	.0020	.0022	.0020	.0020
868783	245769	.027	.340	1.620	.009	.0012	.038	.183	.180	.006	.163	.003	.036	.012	.0060	.0002	.0020	.0015	.0020	.0020
	245817	.027	.341	1.630	.008	.0011	.036	.182	.170	.007	.166	.003	.037	.013	.0058	.0002	.0020	.0017	.0020	.0020
954831	241335	.032	.323	1.620	.007	.0008	.038	.179	.170	.008	.160	.003	.035	.013	.0052	.0002	.0020	.0020	.0020	.0020
954834	248945	.035	.332	1.630	.008	.0008	.034	.179	.170	.007	.162	.004	.037	.013	.0058	.0002	.0020	.0017	.0020	.0020
954835	241338	.027	.320	1.620	.008	.0007	.038	.179	.170	.009	.157	.004	.035	.013	.0044	.0002	.0030	.0017	.0020	.0020
956703	242753	.030	.341	1.640	.007	.0014	.037	.185	.180	.009	.165	.006	.036	.012	.0070	.0004	.0020	.0020	.0020	.0020
957237	242759	.032	.339	1.620	.007	.0012	.046	.176	.170	.004	.163	.005	.035	.012	.0068	.0003	.0020	.0017	.0020	.0020
958047	244728	.033	.328	1.600	.005	.0007	.037	.168	.180	.003	.159	.003	.036	.011	.0044	.0003	.0020	.0018	.0020	.0020
	245805	.034	.333	1.590	.005	.0009	.040	.172	.180	.004	.157	.003	.036	.011	.0052	.0002	.0020	.0023	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=							
Set values <=		.0100	.41	.23	.090	.110	.900
764349	245669	.0020	.38	.17	.040	.053	.501
958047	243261	.0020	.36	.15	.039	.051	.516
	244728	.0020	.36	.15	.039	.050	.510
	245805	.0020	.36	.15	.039	.050	.513
	250574	.0020	.36	.15	.038	.049	.508
>=							
Set values <=		.0100	.41	.22	.090	.110	.900
763206	242756	.0020	.37	.15	.043	.055	.524
763212	241340	.0020	.36	.14	.039	.049	.514
764342	245799	.0020	.36	.14	.040	.053	.536
	245827	.0020	.36	.14	.039	.052	.530
	245831	.0020	.36	.14	.040	.053	.532
	246598	.0020	.37	.15	.040	.053	.548
764345	245819	.0020	.36	.15	.040	.052	.529
	245828	.0020	.36	.15	.040	.052	.527
764349	245669	.0020	.38	.17	.040	.053	.501
	247825	.0020	.38	.17	.040	.053	.503
868783	245769	.0020	.36	.14	.039	.051	.532
	245817	.0020	.36	.14	.040	.053	.525
954831	241335	.0020	.36	.15	.038	.051	.517
954834	248945	.0020	.37	.15	.041	.054	.518
954835	241338	.0020	.36	.14	.039	.052	.515
956703	242753	.0020	.37	.15	.042	.054	.539
957237	242759	.0020	.36	.15	.040	.052	.513
958047	244728	.0020	.36	.15	.039	.050	.510
	245805	.0020	.36	.15	.039	.050	.513

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %

LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

Remarks

Simulated heat treatment of test coupons:

Item 150:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 160:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 170:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 150, 160, 170
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Augsburg, 2024-03-15

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

NV

for DNV
This document has been digitally signed and will therefore not have handwritten signatures
Zambrano Colmenares, Antonio Ramon
Surveyor

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1724000850	122A70C	Q012400269

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

29.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EUROPE STEEL CENTER
Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132601
Our reference: L. Barelds
Your Po nr: PO 1724000850
Your VAT Nr: P.IVA 00082100397

Enquiry Reference: RFQ PLATE GIRDER PLATES BALANCE
Offer Reference: ESP1804LBrev00

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no	Plate no	MTC	HS CODE	C.o.O.
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529519-1	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529519-2	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529518-1	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529517-1	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529520-1	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	57407	529520-2	73018	72085120	Ilsenburg Germany
1	Plates		12000	2051	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	02789	532918-2	73018	72085120	Ilsenburg Germany
2	Plates		12000	2500	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	24,612	12	241,51	2.898,1	02789	532918-1	73018	72085120	Ilsenburg Germany
2	Plates		12000	2500	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	294,38	3.532,5	764349	252314-1	73758	72085120	Voest Alpine Austria
2	Plates		12000	2500	15	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	294,38	3.532,5	765003	251484-1	73758	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861927	170991-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170996-1	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861927	170993-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861927	170988-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170994-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170996-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170995-2	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170997-1	71885	72085120	Voest Alpine Austria
3	Plates		12000	2500	20	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	392,50	4.710,0	861928	170994-1	71885	72085120	Voest Alpine Austria
4	Plates		12000	2500	30	S460MLO Z35 EN10225	3.2 acc EN 10204	1	12000	30	12	588,75	7.065,0	764349	247822-1	73581	72085120	Voest Alpine Austria
								22					**87.947,00**					

73018

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 1/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910 18.10.2023	Nr. (A07)	Order 6910
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

Erzeugnis Product (B01)	Grobblech Heavy plate
Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02–B03)	S460MLO Z35 DIN EN 10225-1 11/2019 MDS-Y40 Rev.6 DIN EN 10029 B 02/11 DIN EN 10163-2 Kl. B UG3 03/05 S460MLOILG

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
01	1	529517 1	57407	TM	15,00 x 2051,0 x 12000
01	1	529517 2	57407	TM	15,00 x 2051,0 x 12000
01	1	529518 1	57407	TM	15,00 x 2051,0 x 12000
01	1	529518 2	57407	TM	15,00 x 2051,0 x 12000
01	1	529519 1	57407	TM	15,00 x 2051,0 x 12000
01	1	529519 2	57407	TM	15,00 x 2051,0 x 12000
01	1	529520 1	57407	TM	15,00 x 2051,0 x 12000
01	1	529520 2	57407	TM	15,00 x 2051,0 x 12000
01	1	532918 1	02789	TM	15,00 x 2051,0 x 12000
01	1	532918 2	02789	TM	15,00 x 2051,0 x 12000
Σ	10	Gewicht / Weight (B12) 28.980 kg / kgs		TM : thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 2/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	18.10.2023	Nr. (A07)	Order 6910	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116550

Abnahme / Inspection (A05): NV **N142STU8**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,14	≤ 0,55	≤ 1,70	≤ 0,020	≤ 0,005	≤ 0,010	0,015–0,055	≤ 0,30	≤ 0,25	≤ 0,70
02789	0,09	0,28	1,56	0,009	0,002	0,003	0,044	0,03	0,05	0,04
57407	0,09	0,31	1,59	0,012	0,001	0,003	0,036	0,02	0,04	0,04

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,08	≤ 0,025	≤ 0,050	≤ 0,0008	≤ 0,25	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,23
02789	0,002	0,015	0,039	0,0001	0,02	0,003	0,002	0,000	0,002	0,18
57407	0,003	0,015	0,045	0,0001	0,01	0,002	0,002	0,000	0,001	0,18

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤ 0,010	≤ 0,41	≤ 0,010	≤ 0,13		≤ 0,12
02789	0,001	0,37	0,000	0,06	0,14	0,04
57407	0,001	0,37	0,000	0,06	0,11	0,05

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 3/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	18.10.2023	Nr. (A07)	Order 6910	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116550

Abnahme / Inspection (A05): NV **N142STU8**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % ≤ 1,70	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
530553 *)	02789	0,09	0,28	1,60	0,007	0,001	0,002	0,040	0,04
528858 *)	57407	0,09	0,33	1,55	0,014	0,001	0,005	0,039	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,050	Mo % ≤ 0,25	B % ≤ 0,0008	EV1 1) % ≤ 0,23
530553 *)	02789	0,05	0,04	0,003	0,019	0,047	0,02	0,0005	0,19
528858 *)	57407	0,04	0,04	0,004	0,019	0,049	0,01	0,0003	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,41	EV3 3) %	EV4 4) % ≤ 0,13	Nb+V % ≤ 0,12
530553 *)	02789	0,38	0,15	0,07	0,05
528858 *)	57407	0,36	0,11	0,07	0,05

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 4/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	Nr. (A07)	Order 6910
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

18.10.2023

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
529517	57407	K4G	Q	TM	P	580	620	0,90	22	
529517	57407	K4G	Q	TS	P	577	610	0,91	22	
529518	57407	K4G	Q	TM	P	577	632	0,86	23	
529518	57407	K4G	Q	TS	P	572	626	0,86	22	
529519	57407	K4G	Q	TM	P	578	633	0,88	21	
529519	57407	K4G	Q	TS	P	567	623	0,88	20	
529520	57407	K4G	Q	TM	P	579	617	0,88	22	
529520	57407	K4G	Q	TS	P	568	614	0,87	22	
532918	02789	K4G	Q	TM	P	512	572	0,86	26	
532918	02789	K4G	Q	TS	P	511	575	0,87	26	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 5/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910 18.10.2023	Nr. (A07)	Order 6910
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

Erzeugnis / Product (B01)	Grobblech / Heavy plate
Werksauftrags-Nr. / Works order No. (A08)	0000116550
Abnahme / Inspection (A05)	NV **N142STU8**
Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03)	S460MLO Z35 DIN EN 10225-1 11/2019 MDS-Y40 Rev.6 DIN EN 10029 B 02/11 DIN EN 10163-2 Kl. B UG3 03/05 S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)
				% ≥ 25			% ≥ 35
529520	57407	K4	TM	71	75	72	73
532427 *)	02789	K4	TM	70	70	70	70

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3
				MPa ≥ 416		
529520	57407	K4	TM	611	609	609
532427 *)	02789	K4	TM	604	605	609

1) K : Kopf / Top
2) 4 : 1/4 Breite / 1/4 Width
3) TM : thermomechanisch gewalzt / thermomechanically rolled
4) MW : Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 6/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	18.10.2023	Nr. (A07)	Order 6910	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
529520	57407	K4O	Q	A5	KV600	-040	105	179	104	129
529520	57407	K4O	Q	TM	KV600	-040	176	223	138	179
529520	57407	K4O	Q	TS	KV600	-040	266	246	259	257
532427 *)	02789	K4O	Q	A5	KV600	-040	118	248	127	164
532427 *)	02789	K4O	Q	TM	KV600	-040	273	228	189	230
532427 *)	02789	K4O	Q	TS	KV600	-040	193	224	231	216

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 7/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	Nr. (A07)	Order 6910
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

18.10.2023

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116550
Works order No.
(A08)
Abnahme NV
Inspection **N142STU8**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
529520	57407	K4		TM	194			
532427 *)	02789	K4		TM	193			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

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Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

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Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1400188**
Seite/Page 8/8
Datum/Date 25.01.2024

Nr. (A07)	Order 6910	18.10.2023	Nr. (A07)	Order 6910	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis	Grobblech	Werksauftrags-Nr.	0000116550
Product	Heavy plate	Works order No.	
(B01)		**(A08)**	
		Abnahme	NV
		Inspection	**N142STU8**
		(A05)	

Werkstoff und Lieferbedingung	S460MLO Z35
Steel grade and terms of delivery	DIN EN 10225-1 11/2019
(B02-B03)	MDS-Y40 Rev.6
	DIN EN 10029 B 02/11
	DIN EN 10163-2 Kl. B UG3 03/05
	S460MLOILG

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

73758

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4FW-24

Z02 Date 09-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378911/C**	**A08 Order-No.:**	**4500255**	**A07 OrderDat.**	01-02-2024	**Date of dispatch**	08-04-2024 400D

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6937

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO NORSOK MDS Y40

B03 Standard EN 10225-1 : 2019

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
764349	252314/1	10	15,00	2500,0	12000	1		3.595	43739	S460MLOVAS
765003	251483/1	10	15,00	2500,0	12000	1		3.598	43741	S460MLOVAS
765003	251484/1	10	15,00	2500,0	12000	1		3.598	43741	S460MLOVAS
869498	251485/1	10	15,00	2500,0	12000	1		3.598	43739	S460MLOVAS
958103	251482/2	10	15,00	2500,0	12000	1		3.598	43741	S460MLOVAS
958103	251482/1	10	15,00	2500,0	12000	1		3.598	43739	S460MLOVAS
		Sum				**6**		**21.585**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Augsburg, 2024-04-12

Z02
Inspection representative voestalpine
Gabriel Marco

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for DNV
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Surveyor

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=		.150				.015															
Set values <=	.140	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.41
764349	.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
765003	.027	.338	1.610	.005	.0009	.040	.184	.170	.008	.162	.004	.037	.013	.0057	.0003	.0020	.0016	.0020	.0020	.0020	.36
869498	.029	.341	1.630	.005	.0008	.040	.184	.170	.006	.157	.004	.034	.012	.0058	.0003	.0020	.0021	.0020	.0020	.0020	.36
958103	.033	.340	1.610	.006	.0004	.030	.160	.170	.005	.163	.005	.036	.011	.0043	.0002	.0020	.0010	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	LF03 %
>=				
Set values <=	.22	.090	.110	.900
764349	.16	.039	.052	.474
765003	.14	.041	.054	.524
869498	.14	.038	.050	.517
958103	.15	.041	.052	.498

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						460	550		17.0	
Set values	<=						580	700			93.00
764349	252314	30,0	15.14	F	O	T	513	610	A5	24.0	84.07
765003	251483	30,0	15.33	F	O	T	522	565	A5	26.3	92.49
	251484	30,0	15.44	F	O	T	504	553	A5	27.1	91.19
869498	251487	30,0	15.28	F	O	T	530	582	A5	23.3	91.05
958103	251482	30,0	15.19	F	O	T	508	567	A5	24.1	89.60

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	29	29	29	46	
764349	250043	CV 10x10	F	ZB2	T	-40	280	270	224	258	strain aged 5%, 60 min. at 250°C
765003	251483	CV 10x10	F	ZB2	T	-40	378	354	341	358	strain aged 5%, 60 min. at 250°C
869498	251487	CV 10x10	F	ZB2	T	-40	331	353	365	350	strain aged 5%, 60 min. at 250°C
958103	251482	CV 10x10	F	ZB2	T	-40	322	335	344	333	strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60	
764349	252314	CV 10x10	F	O	T	-40	324	327	327	326	
765003	251483	CV 10x10	F	O	T	-40	372	380	377	376	
869498	251487	CV 10x10	F	O	T	-40	387	393	401	393	
958103	251482	CV 10x10	F	O	T	-40	364	376	372	370	

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C42 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
764349	245669	F	OS	HV10	222	237	216
765003	251483	F	OS	HV10	195	197	196
869498	251487	F	OS	HV10	207	205	205
958103	251482	F	OS	HV10	200	202	203

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

Augsburg, 2024-04-12

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						440	440	440	25	25	25	35
Set values <=												
764349	252314	Ø	5.96	F	S	632	620	631	77	77	73	75
765003	251483	Ø	6.06	F	S	585	580	586	83	85	84	84
869498	251487	Ø	6.00	F	S	603	604	608	80	80	75	78
958103	251482	Ø	5.98	F	S	597	612	601	84	85	85	84

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
764349	252081	.053	.358	1.600	.005	.0004	.041	.164	.160	.005	.157	.003	.035	.013	.0040	.0002	.0020	.0022	.0020	.0020
765003	251483	.029	.340	1.600	.006	.0005	.041	.179	.170	.008	.157	.003	.036	.013	.0054	.0002	.0020	.0019	.0020	.0020
869498	251487	.033	.347	1.620	.005	.0008	.040	.181	.170	.006	.154	.003	.034	.012	.0057	.0002	.0020	.0023	.0020	.0020
958103	251482	.035	.338	1.600	.007	.0004	.031	.170	.170	.006	.161	.005	.035	.011	.0052	.0002	.0020	.0015	.0020	.0020

Augsburg, 2024-04-12

Z02
Inspection representative voestalpine
Gabriel Marco

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=							
Set values <=		.0100	.41	.22	.090	.110	.900
764349	252081	.0020	.38	.17	.038	.051	.486
765003	251483	.0020	.36	.14	.039	.052	.514
869498	251487	.0020	.36	.15	.037	.049	.511
958103	251482	.0020	.36	.15	.040	.051	.507

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Augsburg, 2024-04-12

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Augsburg, 2024-04-12

Z02
Inspection representative voestalpine
Gabriel Marco

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Surveyor

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2
N142C4ED-4

Z02 Date 15-05-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376103/A	A08 Order-No.:	3500317	A07 OrderDat.	09-03-2023

Date of dispatch 15-05-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6869

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product: Plate
B02 Material: S460MLO
B03 Standard: EN 10225-1 : 2019
Supplementary requirements: Z35 - EN 10164
B04 Delivery condition: thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
751806	174546/1	30	20,00	3050,0	12000	1		5.831	83043	S460MLOVAS
754265	170980/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170980/1	20	20,00	3000,0	11206	1		5.396	83043	S460MLOVAS
754265	170981/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170981/1	20	20,00	3000,0	12000	1		5.790	83043	S460MLOVAS
754272	170903/1	80	40,00	2500,0	12000	1		9.576	83043	S460MLOVAS
754272	170921/1	70	30,00	3000,0	12000	1		8.628	83043	S460MLOVAS
754272	170922/1	70	30,00	3000,0	12000	1		8.625	83043	S460MLOVAS
754272	171630/1	60	30,00	2051,0	12000	1		5.891	83043	S460MLOVAS
754272	171630/2	60	30,00	2051,0	11780	1		5.772	83043	S460MLOVAS
754582	168790/1	120	50,00	2500,0	12000	1		12.069	83041	S460MLOVAS
754582	168792/1	120	50,00	2500,0	12000	1		12.079	83041	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
754582	168793/1	140	50,00	3000,0	12000	1		14.473	83043	S460MLOVAS
754582	168794/1	140	50,00	3000,0	12000	1		14.440	83043	S460MLOVAS
755680	176964/1	80	40,00	2500,0	12000	1		9.574	83043	S460MLOVAS
859727	168580/1	100	50,00	2051,0	12000	1		9.832	83043	S460MLOVAS
860447	171382/1	170	60,00	2051,0	12000	1		11.854	83043	S460MLOVAS
860447	171383/1	170	60,00	2051,0	12000	1		11.855	83043	S460MLOVAS
860758	168375/1	150	50,00	3000,0	16000	1		19.211	83043	S460MLOVAS
860758	168376/1	150	50,00	3000,0	16000	1		19.230	83043	S460MLOVAS
860758	168777/1	130	50,00	2500,0	16000	1		16.102	83043	S460MLOVAS
860758	168779/1	160	50,00	3050,0	12000	1		14.703	83043	S460MLOVAS
860758	168781/1	160	50,00	3050,0	12000	1		14.611	83043	S460MLOVAS
860758	170951/2	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
860758	170951/1	50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
860758	170952/2	50	25,00	2500,0	12000	1		6.015	83043	S460MLOVAS
860758	170952/1	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
860758	170955/2	50	25,00	2500,0	12000	1		5.991	83043	S460MLOVAS
860758	170955/1	50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
861322	170953/1	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170953/2	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170954/2	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861322	170954/1	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861323	168795/1	100	50,00	2051,0	12000	1		9.909	83043	S460MLOVAS
861323	170924/2	40	25,00	2051,0	11872	1		4.857	83043	S460MLOVAS
861323	170924/1	40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
861323	170925/1	40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861323	170925/2	40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861325	171932/1	180	60,00	2500,0	16000	1		19.232	83043	S460MLOVAS
861662	171628/1	100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
861662	171629/1	60	30,00	2051,0	12000	1		5.903	83043	S460MLOVAS
861662	171629/2	60	30,00	2051,0	12000	1		5.902	83043	S460MLOVAS
861665	171889/1	130	50,00	2500,0	16000	1		16.000	83043	S460MLOVAS
861927	170961/1	80	40,00	2500,0	12000	1		9.559	83043	S460MLOVAS
861927	170985/2	20	20,00	3000,0	12000	1		5.795	83043	S460MLOVAS
861927	170985/1	20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
861927	170986/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170986/1	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/1	20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS
861927	170988/1	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170988/2	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170989/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170989/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170990/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170990/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170992/1	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170992/2	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170993/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170993/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	173123/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173123/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173125/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
861928	170994/1	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170994/2	10	20,00	2500,0	12000	1		4.829	83043	S460MLOVAS
861928	170995/1	10	20,00	2500,0	12000	1		4.831	83043	S460MLOVAS
861928	170995/2	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170996/2	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170996/1	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170997/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861928	170997/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
948013	170901/1	90	40,00	3000,0	12000	1		11.490	83043	S460MLOVAS
948013	170902/1	90	40,00	3000,0	12000	1		11.465	83043	S460MLOVAS
948018	170978/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948018	170978/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
948018	170979/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948056	168379/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS
948056	168380/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
948056	168579/1	100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
948257	170927/1	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170927/2	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170928/2	30	20,00	3050,0	12000	1		5.889	83043	S460MLOVAS
948257	170928/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948257	172093/1	30	20,00	3050,0	12000	1		5.911	83043	S460MLOVAS
948257	172093/2	30	20,00	3050,0	11013	1		5.416	83043	S460MLOVAS
948259	170926/1	40	25,00	2051,0	12000	1		4.918	83043	S460MLOVAS
948259	170926/2	40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
948259	170956/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948259	170956/1	30	20,00	3050,0	12000	1		5.890	83043	S460MLOVAS
949159	169974/1	200	65,00	2500,0	12000	1		15.639	83043	S460MLOVAS
949159	171931/1	190	60,00	2800,0	16000	1		21.513	83043	S460MLOVAS
		Sum				**93**		**722.807**		

B14 - Supplementary information

length-deviation for plate(s) 170924/2, 170980/1, 171630/2, 172093/2: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
751806	.037	.329	1.620	.006	.0007	.032	.175	.170	.006	.170	.003	.036	.010	.0070	.0003	.0020	.0023	.0020	.0020	.0020	.37
754265	.037	.331	1.620	.008	.0004	.034	.168	.170	.005	.162	.005	.036	.011	.0053	.0005	.0020	.0014	.0020	.0020	.0020	.36
754272	.028	.340	1.620	.007	.0005	.034	.183	.170	.006	.163	.004	.034	.012	.0046	.0002	.0020	.0016	.0020	.0020	.0020	.36
754582	.027	.342	1.610	.006	.0006	.039	.174	.170	.009	.192	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020	.0020	.36
755680	.029	.317	1.600	.006	.0005	.031	.172	.170	.006	.159	.004	.037	.011	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.35
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
860447	.058	.395	1.540	.008	.0004	.037	.175	.280	.019	.164	.004	.026	.011	.0053	.0002	.0020	.0031	.0020	.0020	.0020	.38
860758	.031	.327	1.600	.005	.0004	.038	.169	.190	.006	.160	.004	.035	.012	.0047	.0002	.0020	.0015	.0020	.0020	.0020	.36
861322	.035	.327	1.590	.005	.0005	.032	.164	.170	.006	.164	.004	.035	.012	.0051	.0002	.0020	.0014	.0020	.0020	.0020	.36
861323	.031	.341	1.620	.005	.0005	.034	.189	.180	.009	.162	.004	.038	.012	.0047	.0003	.0030	.0017	.0020	.0020	.0020	.36
861325	.053	.190	1.540	.006	.0008	.033	.188	.510	.119	.018	.004	.027	.012	.0043	.0002	.0020	.0009	.0020	.0020	.0020	.41
861662	.034	.356	1.630	.007	.0007	.034	.181	.170	.008	.160	.004	.036	.011	.0057	.0002	.0020	.0017	.0020	.0020	.0020	.37
861665	.031	.338	1.610	.006	.0007	.042	.185	.190	.006	.165	.004	.035	.012	.0045	.0003	.0020	.0019	.0020	.0020	.0020	.36
861927	.032	.317	1.610	.008	.0006	.033	.180	.170	.007	.165	.004	.036	.012	.0052	.0003	.0020	.0015	.0020	.0020	.0020	.36
861928	.031	.310	1.610	.006	.0005	.032	.176	.170	.006	.162	.003	.038	.012	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.36
948013	.032	.337	1.630	.006	.0007	.035	.188	.170	.005	.158	.004	.038	.014	.0059	.0003	.0020	.0015	.0020	.0020	.0020	.36
948018	.032	.335	1.610	.007	.0004	.038	.173	.170	.007	.161	.004	.039	.012	.0055	.0002	.0030	.0012	.0020	.0020	.0020	.36
948056	.034	.341	1.620	.008	.0004	.036	.172	.170	.008	.158	.004	.035	.012	.0059	.0002	.0020	.0024	.0020	.0020	.0020	.36
948257	.031	.309	1.610	.006	.0006	.036	.173	.170	.008	.161	.004	.035	.012	.0058	.0002	.0060	.0024	.0020	.0020	.0020	.36
948259	.037	.326	1.620	.006	.0003	.039	.172	.170	.007	.162	.003	.033	.011	.0057	.0002	.0020	.0018	.0020	.0020	.0020	.37
949159	.054	.183	1.540	.007	.0012	.030	.189	.520	.119	.022	.004	.027	.011	.0044	.0002	.0020	.0009	.0020	.0020	.0020	.41

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
751806	.15	.039	.049	4.57
754265	.15	.041	.052	6.42
754272	.14	.038	.050	7.39
754582	.14	.039	.050	7.96
755680	.14	.041	.052	7.75
859727	.15	.039	.050	6.11
860447	.17	.030	.041	6.98
860758	.14	.039	.051	8.09
861322	.15	.039	.051	6.27
861323	.15	.042	.054	7.23
861325	.16	.031	.043	7.67
861662	.15	.040	.051	5.96
861665	.15	.039	.051	9.33
861927	.15	.040	.052	6.35
861928	.14	.041	.053	8.00
948013	.15	.042	.056	5.93
948018	.15	.043	.055	6.91
948056	.15	.039	.051	6.10
948257	.14	.039	.051	6.21
948259	.15	.036	.047	6.84
949159	.17	.031	.042	6.82

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							440	520		17.0			
Set values <=								700			93.00		
751806	174546	30,0	20.06	F	O	T	546	625	A5	19.4	87.38		
754265	170981	30,0	20.20	F	O	T	610	694	A5	18.5	87.80		
860758	170952	30,0	25.53	F	O	T	551	601	A5	22.4	91.61		
	170955	30,0	25.50	F	O	T	529	588	A5	22.9	89.96		
861322	170953	30,0	25.39	F	O	T	559	616	A5	22.0	90.69		
	170954	30,0	25.82	F	O	T	560	614	A5	22.2	91.27		
861323	170924	30,0	25.41	F	O	T	572	615	A5	22.9	92.98		
861927	170986	30,0	20.51	F	O	T	541	634	A5	23.7	85.35		
	170990	30,0	20.69	F	O	T	553	614	A5	20.9	90.03		
	170992	30,0	20.59	F	O	T	537	630	A5	20.8	85.32		
	173123	30,0	20.48	F	O	T	550	616	A5	20.1	89.23		
	173125	30,0	20.58	F	O	T	541	605	A5	19.8	89.44		
861928	170995	30,0	20.60	F	O	T	544	616	A5	20.1	88.36		
	170996	30,0	20.53	F	O	T	549	616	A5	21.7	89.01		
948018	170978	30,0	20.50	F	O	T	548	649	A5	21.3	84.46		
948257	170927	30,0	20.79	F	O	T	554	649	A5	20.2	85.42		
	170928	30,0	20.33	F	O	T	539	650	A5	22.8	82.98		
948259	170926	30,0	25.58	F	O	T	550	602	A5	26.2	91.36		
	170956	30,0	20.28	F	O	T	545	651	A5	20.5	83.78		
>=							420	520		17.0			
Set values <=								700			93.00		
754272	170903	30,0	40.86	F	O	T	522	604	A5	22.4	86.45		
	170921	30,0	30.46	F	O	T	530	585	A5	23.4	90.60		
755680	176964	30,0	40.84	F	O	T	507	590	A5	23.5	85.93		
861662	171629	30,0	30.57	F	O	T	531	600	A5	22.6	88.49		
861927	170961	30,0	40.71	F	O	T	542	628	A5	21.4	86.37		
948013	170902	30,0	40.71	F	O	T	547	632	A5	21.1	86.58		
>=							415	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							415	500		17.0			
Set values <=								675			93.00		
754582	168790	Ø	9.98	F	V	T	503	584	A5	25.2	85.99		
	168793	Ø	9.99	F	V	T	501	585	A5	25.8	85.63		
	168794	Ø	10.00	F	V	T	504	588	A5	28.6	85.70		
	168790	Ø	10.00	F	V	T	518	591	A5	27.1	87.51	001	1
	168793	Ø	10.00	F	V	T	507	580	A5	27.1	87.45	001	1
	168794	Ø	10.00	F	V	T	508	581	A5	28.8	87.48	001	1
859727	168580	Ø	10.03	F	V	T	461	594	A5	30.3	77.73		
	168580	Ø	10.03	F	V	T	513	592	A5	30.3	86.66	001	1
860447	171382	Ø	10.03	F	V	T	432	588	A5	27.3	73.54		
	171382	Ø	10.01	F	V	T	482	577	A5	28.3	83.48	001	1
860758	168375	Ø	9.99	F	V	T	428	516	A5	32.1	83.00		
	168777	Ø	9.99	F	V	T	517	590	A5	27.1	87.53		
	168781	Ø	9.98	F	V	T	495	590	A5	27.4	83.82		
	168375	Ø	10.01	F	V	T	503	582	A5	28.3	86.42	001	1
	168777	Ø	10.00	F	V	T	512	586	A5	25.9	87.51	001	1
	168781	Ø	9.99	F	V	T	504	583	A5	24.6	86.46	001	1
861323	168795	Ø	10.00	F	V	T	493	602	A5	28.1	81.97		
	168795	Ø	10.00	F	V	T	526	598	A5	27.1	87.90	001	1
861325	171932	Ø	10.01	F	V	T	429	564	A5	28.0	76.16		
	171932	Ø	10.00	F	V	T	476	564	A5	28.3	84.32	001	1
861662	171628	Ø	10.01	F	V	T	471	589	A5	28.9	79.89		
	171628	Ø	10.00	F	V	T	542	620	A5	25.0	87.38	001	1
861665	171889	Ø	10.02	F	V	T	504	603	A5	28.3	83.58		
	171889	Ø	9.98	F	V	T	518	597	A5	27.5	86.69	001	1
948056	168380	Ø	9.99	F	V	T	492	602	A5	29.7	81.74		
	168380	Ø	10.01	F	V	T	521	600	A5	28.6	86.71	001	1
949159	171931	Ø	10.01	F	V	T	455	592	A5	25.4	76.91		
	171931	Ø	9.98	F	V	T	493	582	A5	27.7	84.75	001	1
>=							405	500		17.0			
Set values <=								675			93.00		
949159	169974	Ø	10.03	F	V	T	452	587	A5	25.7	77.04		
	169974	Ø	10.02	F	V	T	505	593	A5	26.3	85.18	001	1

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							405	500		17.0			
Set values <=								675			93.00		

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
751806	174546	CV 10x10	F	O	T	-40	336	344	329	336			
754265	170981	CV 10x10	F	O	T	-40	253	296	323	291			
754272	170903	CV 10x10	F	O	T	-40	325	336	351	338			
	170921	CV 10x10	F	O	T	-40	365	364	340	356			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
Set values	<=												
754582	168790	CV 10x10	F	O	T	-40	355	346	365	355			
	168793	CV 10x10	F	O	T	-40	357	371	367	365			
	168794	CV 10x10	F	O	T	-40	364	380	361	368			
	168790	CV 10x10	F	O	T	-40	318	335	335	329	001	1	
	168793	CV 10x10	F	O	T	-40	337	329	310	325	001	1	
	168794	CV 10x10	F	O	T	-40	342	299	352	331	001	1	
	168790	CV 10x10	F	K	T	-40	361	365	359	362			
	168793	CV 10x10	F	K	T	-40	391	46	350	262			
	168794	CV 10x10	F	K	T	-40	382	403	401	395			
	168790	CV 10x10	F	K	T	-40	317	322	313	318	001	1	
	168793	CV 10x10	F	K	T	-40	356	309	320	328	001	1	
	168794	CV 10x10	F	K	T	-40	360	309	322	330	001	1	
755680	176964	CV 10x10	F	O	T	-40	375	358	361	364			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
859727	168580	CV 10x10	F	O	T	-40	384	337	354	358			
	168580	CV 10x10	F	O	T	-40	298	315	306	306	001	1	
	168580	CV 10x10	F	K	T	-40	413	383	407	401			
	168580	CV 10x10	F	K	T	-40	303	280	310	298	001	1	
860447	171382	CV 10x10	F	O	T	-40	284	137	152	191			
	171382	CV 10x10	F	O	T	-40	234	229	303	255	001	1	
	171382	CV 10x10	F	K	T	-40	44	177	228	150			
	171382	CV 10x10	F	K	T	-40	92	181	145	140	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
860758	168375	CV 10x10	F	O	T	-40	331	358	350	346			
	168777	CV 10x10	F	O	T	-40	349	358	347	351			
	168781	CV 10x10	F	O	T	-40	350	357	355	354			
	170955	CV 10x10	F	O	T	-40	348	349	347	348			
	168375	CV 10x10	F	O	T	-40	280	306	191	259	001	1	
	168777	CV 10x10	F	O	T	-40	312	283	329	308	001	1	
	168781	CV 10x10	F	O	T	-40	277	320	329	309	001	1	
	168375	CV 10x10	F	K	T	-40	314	344	358	339			
	168777	CV 10x10	F	K	T	-40	363	364	356	361			
	168781	CV 10x10	F	K	T	-40	143	42	82	89			
	168375	CV 10x10	F	K	T	-40	318	280	335	311	001	1	
	168777	CV 10x10	F	K	T	-40	292	304	337	311	001	1	
	168781	CV 10x10	F	K	T	-40	61	116	116	98	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
861322	170954	CV 10x10	F	O	T	-40	340	328	327	332			
861323	168795	CV 10x10	F	O	T	-40	341	339	347	342			
	170924	CV 10x10	F	O	T	-40	292	318	309	307			
	168795	CV 10x10	F	O	T	-40	311	297	310	306	001	1	
	168795	CV 10x10	F	K	T	-40	327	320	337	328			
	168795	CV 10x10	F	K	T	-40	280	315	312	302	001	1	
861325	171932	CV 10x10	F	O	T	-40	338	339	347	341			
	171932	CV 10x10	F	O	T	-40	263	320	310	298	001	1	
	171932	CV 10x10	F	K	T	-40	324	352	336	337			
	171932	CV 10x10	F	K	T	-40	304	263	264	277	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
861662	171628	CV 10x10	F	O	T	-40	313	329	328	323			
	171629	CV 10x10	F	O	T	-40	319	310	325	318			
	171628	CV 10x10	F	O	T	-40	257	59	262	193	001	1	
	171628	CV 10x10	F	K	T	-40	339	359	356	351			
	171628	CV 10x10	F	K	T	-40	171	228	233	211	001	1	
861665	171889	CV 10x10	F	O	T	-40	324	344	355	341			
	171889	CV 10x10	F	O	T	-40	257	290	312	286	001	1	
	171889	CV 10x10	F	K	T	-40	375	362	357	365			
	171889	CV 10x10	F	K	T	-40	46	294	290	210	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
861927	170961	CV 10x10	F	O	T	-40	340	325	333	332			
	170986	CV 10x10	F	O	T	-40	346	353	352	350			
	170990	CV 10x10	F	O	T	-40	377	362	358	365			
	170992	CV 10x10	F	O	T	-40	361	361	367	363			
	173123	CV 10x10	F	O	T	-40	339	344	351	345			
861928	170996	CV 10x10	F	O	T	-40	358	363	361	360			
948013	170902	CV 10x10	F	O	T	-40	339	333	333	335			
948018	170978	CV 10x10	F	O	T	-40	352	357	360	357			
948056	168380	CV 10x10	F	O	T	-40	332	354	359	348			
	168380	CV 10x10	F	O	T	-40	291	273	323	296	001	1	
	168380	CV 10x10	F	K	T	-40	359	374	360	364			
	168380	CV 10x10	F	K	T	-40	323	293	272	296	001	1	
948257	170928	CV 10x10	F	O	T	-40	282	314	329	308			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
948259	170926	CV 10x10	F	O	T	-40	341	344	333	339			
	170956	CV 10x10	F	O	T	-40	315	344	341	333			
949159	169974	CV 10x10	F	O	T	-40	314	311	314	313			
	171931	CV 10x10	F	O	T	-40	324	331	313	323			
	169974	CV 10x10	F	O	T	-40	293	283	279	285	001	1	
	171931	CV 10x10	F	O	T	-40	291	291	283	288	001	1	
	169974	CV 10x10	F	K	T	-40	213	236	266	238			
	171931	CV 10x10	F	K	T	-40	291	276	265	277			
	169974	CV 10x10	F	K	T	-40	214	224	252	230	001	1	
	171931	CV 10x10	F	K	T	-40	210	224	227	220	001	1	
>=						-40	29	29	29	46			
Set values <=													
751806	174546	CV 10x10	F	ZB2	T	-40	288	304	259	284			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	29	29	29	46			
Set values <=													
754265	170981	CV 10x10	F	ZB2	T	-40	265	236	244	248			strain aged 5%, 60 min. at 250°C
754272	170903	CV 10x10	F	ZB2	T	-40	321	333	325	326			strain aged 5%, 60 min. at 250°C
754582	168794	CV 10x10	F	ZB2	T	-40	332	54	327	238			strain aged 5%, 60 min. at 250°C
755680	176964	CV 10x10	F	ZB2	T	-40	317	325	320	320			strain aged 5%, 60 min. at 250°C
859727	168580	CV 10x10	F	ZB2	T	-40	329	329	331	330			strain aged 5%, 60 min. at 250°C
860447	163141	CV 10x10	F	ZB2	T	-40	66	62	48	59			strain aged 5%, 60 min. at 250°C
860758	168781	CV 10x10	F	ZB2	T	-40	59	63	67	63			strain aged 5%, 60 min. at 250°C
861322	170954	CV 10x10	F	ZB2	T	-40	288	288	241	272			strain aged 5%, 60 min. at 250°C
861323	168795	CV 10x10	F	ZB2	T	-40	305	310	270	295			strain aged 5%, 60 min. at 250°C
	170924	CV 10x10	F	ZB2	T	-40	319	322	323	321			strain aged 5%, 60 min. at 250°C
861325	168332	CV 10x10	F	ZB2	T	-40	282	301	297	293			strain aged 5%, 60 min. at 250°C
861662	171628	CV 10x10	F	ZB2	T	-40	264	298	296	286			strain aged 5%, 60 min. at 250°C
	171629	CV 10x10	F	ZB2	T	-40	278	297	280	285			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
861665	171889	CV 10x10	F	ZB2	T	-40	126	89	105	107			strain aged 5%, 60 min. at 250°C
861927	170961	CV 10x10	F	ZB2	T	-40	316	224	174	238			strain aged 5%, 60 min. at 250°C
861928	170996	CV 10x10	F	ZB2	T	-40	335	333	345	338			strain aged 5%, 60 min. at 250°C
948013	170902	CV 10x10	F	ZB2	T	-40	278	309	50	213			strain aged 5%, 60 min. at 250°C
948018	170978	CV 10x10	F	ZB2	T	-40	323	306	340	323			strain aged 5%, 60 min. at 250°C
948056	168380	CV 10x10	F	ZB2	T	-40	290	325	317	310			strain aged 5%, 60 min. at 250°C
948257	170928	CV 10x10	F	ZB2	T	-40	252	261	267	260			strain aged 5%, 60 min. at 250°C
948259	170926	CV 10x10	F	ZB2	T	-40	320	323	315	319			strain aged 5%, 60 min. at 250°C
949159	169974	CV 10x10	F	ZB2	T	-40	301	300	293	298			strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  K: ½ t
  O: surface
  ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
751806	174546	F	OS	HV10	200	201	202
754265	159038	F	OS	HV10	206	213	209
754272	170921	F	OS	HV10	190	188	192
754582	164400	F	OS	HV10	198	202	202
755680	176964	F	OS	HV10	211	211	214
859727	154898	F	OS	HV10	203	199	204
860447	171382	F	OS	HV10	251	255	255
860758	168781	F	OS	HV10	244	240	237
861322	170954	F	OS	HV10	208	206	211
861323	170924	F	OS	HV10	191	199	195
861325	171932	F	OS	HV10	218	211	212
861662	171629	F	OS	HV10	202	210	203
861665	171889	F	OS	HV10	224	226	226
861927	170992	F	OS	HV10	208	208	206
861928	170996	F	OS	HV10	219	218	213
948013	159551	F	OS	HV10	196	195	195
948018	159076	F	OS	HV10	216	215	217
948056	158938	F	OS	HV10	199	199	201
948257	170928	F	OS	HV10	225	226	220
948259	170926	F	OS	HV10	206	209	207
949159	169974	F	OS	HV10	265	264	257

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z (SV) %	Z (SV) %	Z (SV) %	Z (AV) %
>=						416	416	416	25	25	25	35
Set values <=												
751806	174546	Ø	6.00	F	S	605	608	609	82	82	82	82
754265	170981	Ø	6.02	F	S	715	713	727	81	81	79	80
754272	170921	Ø	9.97	F	S	573	576	575	81	78	83	81
755680	176964	Ø	9.94	F	S	564	565	564	82	83	83	83
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861322	170954	Ø	10.00	F	S	610	608	609	77	79	78	78
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861927	170961	Ø	9.96	F	S	599	598	597	82	81	78	80
	170992	Ø	6.02	F	S	615	615	619	83	85	84	84
861928	170996	Ø	6.02	F	S	608	608	606	86	83	85	85
948013	170902	Ø	9.97	F	S	600	602	599	82	81	82	82
948018	170978	Ø	6.02	F	S	622	469	624	83	76	83	81
948257	170928	Ø	6.09	F	S	633	631	629	83	83	82	82
948259	170926	Ø	9.95	F	S	589	589	589	82	84	83	83
	170956	Ø	5.99	F	S	636	636	636	82	82	83	82
>=						400	400	400	25	25	25	35
Set values <=												
754582	164880	Ø	9.98	F	S	562	561	562	83	83	85	84
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
860447	171382	Ø	9.96	F	S	592	588	592	70	71	75	72
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861325	168329	Ø	9.98	F	S	590	587	591	81	81	78	80
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861665	171889	Ø	9.97	F	S	577	578	577	80	81	81	80
948056	158938	Ø	9.97	F	S	583	579	582	83	83	84	83
949159	169974	Ø	9.92	F	S	593	592	593	80	79	74	78

SpThickn: specimen thickness

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %

C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
751806	151215	.036	.334	1.630	.006	.0005	.032	.171	.170	.007	.166	.003	.036	.010	.0065	.0002	.0020	.0022	.0020	.0020
754265	170981	.040	.326	1.600	.008	.0007	.030	.169	.170	.004	.162	.005	.037	.011	.0057	.0005	.0020	.0013	.0020	.0020
754272	170921	.029	.335	1.620	.007	.0006	.032	.183	.170	.005	.162	.004	.034	.012	.0045	.0002	.0020	.0015	.0020	.0020
754582	168790	.030	.290	1.580	.006	.0006	.035	.178	.230	.025	.138	.004	.033	.011	.0050	.0002	.0020	.0013	.0020	.0020
	168793	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.189	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020
	168794	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.190	.004	.035	.011	.0050	.0002	.0020	.0014	.0020	.0020
755680	176964	.030	.323	1.610	.006	.0005	.031	.176	.170	.007	.158	.004	.035	.010	.0047	.0003	.0020	.0013	.0020	.0020
859727	154868	.030	.345	1.620	.006	.0003	.034	.171	.180	.006	.171	.003	.035	.011	.0050	.0002	.0020	.0019	.0020	.0020
860447	162234	.057	.388	1.530	.008	.0003	.037	.171	.280	.018	.162	.003	.025	.012	.0043	.0002	.0020	.0028	.0020	.0020
	171383	.060	.390	1.540	.008	.0007	.036	.175	.280	.018	.164	.004	.026	.011	.0042	.0003	.0020	.0026	.0020	.0020
860758	168375	.033	.323	1.610	.005	.0004	.038	.165	.190	.006	.160	.004	.035	.012	.0058	.0002	.0020	.0013	.0020	.0020
	168777	.030	.331	1.600	.005	.0005	.038	.172	.180	.006	.180	.004	.035	.012	.0046	.0003	.0020	.0013	.0020	.0020
	168781	.033	.323	1.610	.005	.0004	.038	.164	.190	.006	.159	.004	.035	.012	.0047	.0002	.0020	.0014	.0020	.0020
	170951	.033	.321	1.580	.005	.0005	.038	.166	.190	.006	.160	.003	.034	.012	.0046	.0002	.0020	.0015	.0020	.0020
861322	170954	.038	.321	1.590	.005	.0007	.028	.178	.180	.007	.167	.004	.033	.011	.0052	.0003	.0020	.0014	.0020	.0020
861323	170924	.031	.336	1.620	.005	.0005	.035	.184	.180	.009	.161	.004	.038	.012	.0048	.0002	.0020	.0016	.0020	.0020
861325	171923	.050	.186	1.520	.006	.0005	.036	.184	.510	.118	.015	.004	.026	.012	.0048	.0002	.0020	.0011	.0020	.0020
861662	171629	.035	.350	1.610	.007	.0009	.033	.180	.170	.008	.159	.003	.036	.010	.0052	.0002	.0020	.0016	.0020	.0020
861665	171889	.032	.335	1.590	.006	.0007	.043	.182	.200	.006	.167	.003	.035	.012	.0045	.0003	.0020	.0018	.0020	.0020
861927	170986	.032	.323	1.630	.009	.0004	.034	.179	.170	.007	.164	.003	.036	.012	.0051	.0003	.0020	.0017	.0020	.0020
	170990	.032	.313	1.590	.008	.0006	.031	.178	.170	.006	.162	.003	.035	.012	.0050	.0003	.0020	.0017	.0020	.0020
	170992	.032	.318	1.610	.008	.0005	.031	.179	.170	.006	.165	.003	.037	.013	.0050	.0003	.0020	.0015	.0020	.0020
	173123	.033	.316	1.590	.008	.0005	.030	.181	.170	.006	.161	.003	.034	.012	.0063	.0003	.0020	.0018	.0020	.0020
861928	170996	.031	.325	1.620	.006	.0005	.031	.181	.170	.007	.160	.004	.036	.011	.0045	.0003	.0020	.0013	.0020	.0020
948013	170902	.035	.335	1.620	.006	.0007	.032	.187	.170	.005	.158	.003	.038	.013	.0051	.0003	.0020	.0013	.0020	.0020
948018	170978	.034	.330	1.600	.007	.0005	.038	.168	.170	.008	.166	.003	.039	.012	.0049	.0003	.0020	.0011	.0020	.0020
948056	168380	.035	.332	1.590	.007	.0005	.036	.170	.170	.007	.157	.003	.035	.012	.0048	.0002	.0020	.0025	.0020	.0020
948257	170928	.033	.308	1.600	.006	.0006	.034	.169	.170	.007	.162	.003	.036	.012	.0053	.0002	.0060	.0021	.0020	.0020
948259	170926	.038	.325	1.610	.005	.0006	.037	.170	.170	.006	.163	.003	.034	.012	.0050	.0003	.0020	.0015	.0020	.0020
949159	169974	.055	.183	1.530	.007	.0012	.029	.188	.520	.120	.021	.004	.026	.012	.0051	.0002	.0020	.0009	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
751806	151215	.0020	.0020	.37	.15	.039	.049	4.92
754265	170981	.0020	.0020	.36	.15	.042	.053	5.26
754272	170921	.0020	.0020	.36	.14	.038	.050	7.11
754582	168790	.0020	.0020	.36	.14	.037	.048	7.00
	168793	.0020	.0020	.35	.14	.039	.050	8.57
	168794	.0020	.0020	.35	.14	.039	.050	8.40
755680	176964	.0020	.0020	.36	.14	.039	.049	6.60
859727	154868	.0020	.0020	.36	.14	.038	.049	6.80
860447	162234	.0020	.0020	.38	.17	.028	.040	8.60
	171383	.0020	.0020	.39	.17	.030	.041	8.57
860758	168375	.0020	.0020	.36	.15	.039	.051	6.55
	168777	.0020	.0020	.36	.14	.039	.051	8.26
	168781	.0020	.0020	.36	.15	.039	.051	8.09
	170951	.0020	.0020	.35	.14	.037	.049	8.26
861322	170954	.0020	.0020	.36	.15	.037	.048	5.38
861323	170924	.0020	.0020	.36	.15	.042	.054	7.29
861325	171923	.0020	.0020	.40	.16	.030	.042	7.50
861662	171629	.0020	.0020	.36	.15	.039	.049	6.35
861665	171889	.0020	.0020	.36	.15	.038	.050	9.56
861927	170986	.0020	.0020	.36	.15	.039	.051	6.67
	170990	.0020	.0020	.36	.14	.038	.050	6.20
	170992	.0020	.0020	.36	.15	.040	.053	6.20
	173123	.0020	.0020	.36	.15	.037	.049	4.76
861928	170996	.0020	.0020	.36	.15	.040	.051	6.89
948013	170902	.0020	.0020	.37	.15	.041	.054	6.27
948018	170978	.0020	.0020	.36	.15	.042	.054	7.76
948056	168380	.0020	.0020	.36	.15	.038	.050	7.50
948257	170928	.0020	.0020	.36	.14	.039	.051	6.42
948259	170926	.0020	.0020	.36	.15	.037	.049	7.40
949159	169974	.0020	.0020	.41	.17	.030	.042	5.69

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 120:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 130:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 140:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 150:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

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Remarks

Item 160:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 170:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 180:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 190:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 200:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80, 90
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142C4FV-4

Z02 Date 14-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378558/C**	**A08 Order-No.:**	**4500121**	**A07 OrderDat.**	04-01-2024	**Date of dispatch**	14-03-2024 400D

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6926

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO NORSOK MDS Y40

B03 Standard EN 10225-1 : 2019

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
763206	**242756/1**	160	50,00	2500,0	12000	1		12.003	42848	S460MLOVAS
763206	**242757/1**	160	50,00	2500,0	12000	1		12.022	42848	S460MLOVAS
763212	**244684/1**	170	50,00	3000,0	12000	1		14.407	42848	S460MLOVAS
764342	**245825/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**245825/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245827/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245827/2**	50	25,00	2500,0	12000	1		6.014	42845	S460MLOVAS
764342	**245829/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**245829/1**	50	25,00	2500,0	12000	1		6.014	42845	S460MLOVAS
764342	**245831/1**	50	25,00	2500,0	12000	1		6.013	42845	S460MLOVAS
764342	**245831/2**	50	25,00	2500,0	12000	1		6.012	42845	S460MLOVAS
764342	**246598/21**	40	25,00	2051,0	12000	1		4.936	42845	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
764342	246598/11	40	25,00	2051,0	12000	1		4.934	42845	S460MLOVAS
764342	246599/2	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246599/1	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246600/11	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246600/21	40	25,00	2051,0	12000	1		4.916	42845	S460MLOVAS
764342	246601/21	40	25,00	2051,0	12000	1		4.917	42845	S460MLOVAS
764342	246601/11	40	25,00	2051,0	12000	1		4.918	42845	S460MLOVAS
764345	245819/1	70	25,00	3050,0	12000	1		7.328	42846	S460MLOVAS
764345	245821/1	70	25,00	3050,0	12000	1		7.330	42846	S460MLOVAS
764345	245823/1	70	25,00	3050,0	12000	1		7.328	42846	S460MLOVAS
764345	245824/1	70	25,00	3050,0	12000	1		7.333	42846	S460MLOVAS
764345	245826/1	70	25,00	3050,0	12000	1		7.332	42846	S460MLOVAS
764345	245828/1	70	25,00	3050,0	12000	1		7.329	42846	S460MLOVAS
764349	243148/21	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243148/11	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243149/1	10	8,00	2051,0	12000	1		1.593	42845	S460MLOVAS
764349	243149/2	10	8,00	2051,0	12000	1		1.593	42845	S460MLOVAS
764349	243150/1	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243150/2	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243151/2	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	243151/1	10	8,00	2051,0	12000	1		1.594	42845	S460MLOVAS
764349	245669/1	80	30,00	2500,0	12000	1		7.145	42846	S460MLOVAS
764349	247822/1	80	30,00	2500,0	12000	1		7.151	42846	S460MLOVAS
764349	247823/1	60	25,00	2500,0	16000	1		8.013	42846	S460MLOVAS
764349	247825/1	60	25,00	2500,0	16000	1		8.020	42846	S460MLOVAS
764349	251234/1	80	30,00	2500,0	12000	1		7.149	42846	S460MLOVAS
868783	245817/1	60	25,00	2500,0	16000	1		7.978	42846	S460MLOVAS
868783	245822/1	60	25,00	2500,0	16000	1		8.010	42846	S460MLOVAS
954831	241335/1	170	50,00	3000,0	12000	1		14.457	42848	S460MLOVAS
954834	248945/1	160	50,00	2500,0	12000	1		12.065	42848	S460MLOVAS
954835	241337/1	150	50,00	2051,0	12000	1		9.900	42848	S460MLOVAS
954835	241338/1	150	50,00	2051,0	12000	1		9.884	42848	S460MLOVAS
954835	244691/1	50	25,00	2500,0	12000	1		6.012	42846	S460MLOVAS
954835	244691/2	50	25,00	2500,0	12000	1		6.013	42846	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
956703	242754/1	160	50,00	2500,0	12000	1		11.977	42848	S460MLOVAS
956703	242755/1	160	50,00	2500,0	12000	1		12.069	42848	S460MLOVAS
957237	242752/1	170	50,00	3000,0	12000	1		14.402	42848	S460MLOVAS
958047	244739/1	30	12,00	2051,0	12000	1		2.369	42845	S460MLOVAS
958047	244739/2	30	12,00	2051,0	12000	1		2.369	42845	S460MLOVAS
958047	244740/21	30	12,00	2051,0	12000	1		2.370	42845	S460MLOVAS
958047	244740/11	30	12,00	2051,0	12000	1		2.373	42845	S460MLOVAS
958047	245805/1	80	30,00	2500,0	12000	1		7.148	42846	S460MLOVAS
958047	245807/1	80	30,00	2500,0	12000	1		7.146	42846	S460MLOVAS
958047	245810/1	80	30,00	2500,0	12000	1		7.146	42846	S460MLOVAS
958047	250573/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250574/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250574/2	20	10,00	2051,0	12000	1		1.981	42845	S460MLOVAS
958047	250575/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250576/1	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
958047	250576/2	20	10,00	2051,0	12000	1		1.982	42845	S460MLOVAS
	Sum					**62**		**375.694**		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
	>=		.150				.015															
Set values	<=	.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.41
764349		.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
958047		.034	.319	1.610	.005	.0008	.038	.163	.170	.004	.160	.003	.037	.012	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.36
	>=		.150				.015															
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.41
763206		.033	.338	1.620	.005	.0008	.043	.176	.170	.003	.158	.004	.039	.012	.0045	.0002	.0020	.0017	.0020	.0020	.0020	.36
763212		.031	.329	1.620	.007	.0004	.035	.187	.170	.006	.160	.004	.035	.010	.0057	.0002	.0020	.0016	.0030	.0020	.0020	.36
764342		.027	.345	1.620	.007	.0009	.032	.174	.170	.010	.166	.004	.037	.014	.0048	.0002	.0020	.0014	.0020	.0020	.0020	.36
764345		.032	.343	1.650	.011	.0015	.042	.168	.170	.004	.160	.004	.037	.012	.0051	.0002	.0020	.0008	.0020	.0020	.0020	.36
764349		.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
868783		.027	.336	1.620	.007	.0013	.034	.184	.170	.007	.168	.003	.037	.012	.0057	.0002	.0020	.0014	.0020	.0020	.0020	.36
954831		.030	.315	1.600	.006	.0006	.038	.168	.170	.008	.160	.004	.037	.014	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.35
954834		.031	.338	1.640	.008	.0008	.036	.180	.170	.007	.164	.004	.036	.014	.0062	.0002	.0020	.0022	.0020	.0020	.0020	.36
954835		.029	.330	1.650	.007	.0010	.038	.186	.170	.009	.160	.005	.036	.013	.0058	.0003	.0030	.0017	.0020	.0020	.0020	.37
956703		.026	.350	1.640	.008	.0011	.040	.184	.180	.009	.165	.006	.036	.013	.0067	.0002	.0020	.0025	.0020	.0020	.0020	.36
957237		.032	.344	1.630	.007	.0010	.046	.179	.170	.005	.163	.006	.036	.013	.0047	.0002	.0020	.0018	.0020	.0020	.0020	.36
958047		.034	.319	1.610	.005	.0008	.038	.163	.170	.004	.160	.003	.037	.012	.0042	.0002	.0020	.0013	.0020	.0020	.0020	.36

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	LF03 %
>= Set values <=	.23	.090	.110	.900
764349	.16	.039	.052	.474
958047	.15	.040	.052	.497
>= Set values <=	.22	.090	.110	.900
763206	.15	.043	.055	.507
763212	.14	.039	.049	.523
764342	.14	.041	.055	.520
764345	.15	.041	.053	.502
764349	.16	.039	.052	.474
868783	.14	.040	.052	.529
954831	.14	.041	.055	.506
954834	.15	.040	.054	.521
954835	.15	.041	.054	.525
956703	.14	.042	.055	.538
957237	.15	.042	.055	.517
958047	.15	.040	.052	.497

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	550		17.0			
Set values <=							580	700			93.00		
764349	243148	30,0	8.27	F	O	T	537	612	A5	24.8	87.64		
	243150	30,0	8.14	F	O	T	538	618	A5	22.4	87.02		
958047	244740	30,0	12.19	F	O	T	537	600	A5	20.6	89.39		
	250573	30,0	10.50	F	O	T	535	652	A5	19.1	82.09		
	250575	30,0	10.22	F	O	T	523	637	A5	19.8	82.09		
>=							460	550		17.0			
Set values <=							580	700			90.00		
763206	242756	Ø	9.98	F	V	T	516	603	A5	22.5	85.63		
	242756	Ø	9.95	F	V	T	513	599	A5	27.9	85.57	001	1
763212	244684	Ø	10.01	F	V	T	468	579	A5	27.2	80.98		
	244684	Ø	10.00	F	V	T	514	588	A5	26.6	87.39	001	1
764342	245827	30,0	25.33	F	O	T	533	611	A5	20.6	87.25		
	245831	30,0	25.36	F	O	T	536	601	A5	21.0	89.06		
	246598	30,0	25.16	F	O	T	538	602	A5	20.9	89.31		
764345	245819	30,0	25.31	F	O	T	534	634	A5	20.9	84.27		
	245828	30,0	25.18	F	O	T	538	622	A5	20.7	86.53		
764349	245669	30,0	30.19	F	O	T	539	644	A5	20.5	83.74		
	247823	30,0	25.11	F	O	T	536	617	A5	21.0	86.89		
868783	245822	30,0	25.47	F	O	T	539	603	A5	20.9	89.42		
954831	241335	Ø	10.01	F	V	T	491	594	A5	25.8	82.73		
	241335	Ø	9.91	F	V	T	522	601	A5	25.7	86.79	001	1
954834	248945	Ø	9.96	F	V	T	514	597	A5	24.6	86.01		
	248945	Ø	9.99	F	V	T	535	609	A5	25.6	87.83	001	1
954835	241338	Ø	10.00	F	V	T	468	572	A5	29.6	81.75		
	241338	Ø	10.05	F	V	T	509	589	A5	28.9	86.43	001	1
	244691	30,0	25.29	F	O	T	527	591	A5	24.5	89.20		
956703	242753	Ø	9.96	F	V	T	466	567	A5	25.4	82.11		
	242753	Ø	9.99	F	V	T	502	577	A5	26.2	87.15	001	1
957237	242752	Ø	9.96	F	V	T	521	599	A5	26.6	86.90		
	242752	Ø	10.01	F	V	T	526	594	A5	26.8	88.52	001	1
958047	245808	30,0	30.11	F	O	T	538	603	A5	21.3	89.23		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width MM	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values	>=					-40	21	21	21	30			
764349	243150	CV 10x5	F	O	T	-40	109	105	107	107			
Set values	>=					-40	32	32	32	45			
958047	250575	CV 10x7,5	F	O	T	-40	233	236	242	237			
Set values	>=					-40	42	42	42	60			
763206	242756	CV 10x10	F	O	T	-40	317	312	310	313			
	242756	CV 10x10	F	O	T	-40	228	240	267	245	001	1	
	242756	CV 10x10	F	K	T	-40	323	297	319	313			
	242756	CV 10x10	F	K	T	-40	234	257	251	247	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
763212	244684	CV 10x10	F	O	T	-40	376	372	381	376			
	244684	CV 10x10	F	O	T	-40	332	310	313	318	001	1	
	244684	CV 10x10	F	K	T	-40	379	370	380	376			
	244684	CV 10x10	F	K	T	-40	292	297	300	296	001	1	
764342	245827	CV 10x10	F	O	T	-40	335	348	336	340			
	245831	CV 10x10	F	O	T	-40	322	338	327	329			
	246598	CV 10x10	F	O	T	-40	377	367	375	373			
764345	245819	CV 10x10	F	O	T	-40	322	341	323	328			
	245828	CV 10x10	F	O	T	-40	337	327	341	335			
764349	245669	CV 10x10	F	O	T	-40	332	330	322	328			
	247823	CV 10x10	F	O	T	-40	338	346	339	341			
868783	245822	CV 10x10	F	O	T	-40	332	316	336	328			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
954831	241335	CV 10x10	F	O	T	-40	352	372	372	365			
	241335	CV 10x10	F	O	T	-40	179	252	266	232	001	1	
	241335	CV 10x10	F	K	T	-40	360	350	351	354			
	241335	CV 10x10	F	K	T	-40	118	130	228	159	001	1	
954834	248945	CV 10x10	F	O	T	-40	344	348	349	347			
	248945	CV 10x10	F	O	T	-40	278	281	283	281	001	1	
	248945	CV 10x10	F	K	T	-40	345	377	384	368			
	248945	CV 10x10	F	K	T	-40	270	271	73	205	001	1	
954835	241338	CV 10x10	F	O	T	-40	359	364	377	367			
	244691	CV 10x10	F	O	T	-40	326	355	355	345			
	241338	CV 10x10	F	O	T	-40	289	324	309	307	001	1	
	241338	CV 10x10	F	K	T	-40	415	418	421	418			
	241338	CV 10x10	F	K	T	-40	327	317	328	324	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
956703	242753	CV 10x10	F	O	T	-40	317	327	318	321			
	242753	CV 10x10	F	O	T	-40	256	272	267	265	001	1	
	242753	CV 10x10	F	K	T	-40	115	304	308	242			
	242753	CV 10x10	F	K	T	-40	231	194	122	182	001	1	
957237	242752	CV 10x10	F	O	T	-40	338	349	347	344			
	242752	CV 10x10	F	O	T	-40	250	260	316	275	001	1	
	242752	CV 10x10	F	K	T	-40	330	352	346	343			
	242752	CV 10x10	F	K	T	-40	288	291	291	290	001	1	
958047	244740	CV 10x10	F	O	T	-40	370	357	362	363			
	245808	CV 10x10	F	O	T	-40	337	309	310	319			
>= Set values <=						-40	29	29	29	46			
763206	242756	CV 10x10	F	ZB2	T	-40	243	304	296	281			strain aged 5%, 60 min. at 250°C

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Surveyor

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
763212	244684	CV 10x10	F	ZB2	T	-40	375	384	375	378			strain aged 5%, 60 min. at 250°C
764342	245803	CV 10x10	F	ZB2	T	-40	318	32	316	222			strain aged 5%, 60 min. at 250°C
764345	242446	CV 10x10	F	ZB2	T	-40	294	346	345	328			strain aged 5%, 60 min. at 250°C
764349	245670	CV 10x10	F	ZB2	T	-40	322	321	329	324			strain aged 5%, 60 min. at 250°C
	250043	CV 10x10	F	ZB2	T	-40	280	270	224	258			strain aged 5%, 60 min. at 250°C
868783	244527	CV 10x10	F	ZB2	T	-40	337	333	343	338			strain aged 5%, 60 min. at 250°C
954831	241335	CV 10x10	F	ZB2	T	-40	308	314	311	311			strain aged 5%, 60 min. at 250°C
954834	248945	CV 10x10	F	ZB2	T	-40	337	303	369	336			strain aged 5%, 60 min. at 250°C
954835	241338	CV 10x10	F	ZB2	T	-40	364	352	341	352			strain aged 5%, 60 min. at 250°C
956703	242753	CV 10x10	F	ZB2	T	-40	285	215	307	269			strain aged 5%, 60 min. at 250°C
957237	242752	CV 10x10	F	ZB2	T	-40	138	305	126	189			strain aged 5%, 60 min. at 250°C
958047	243261	CV 10x10	F	ZB2	T	-40	127	119	275	174			strain aged 5%, 60 min. at 250°C

C40;shape:

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

CV 10x10: Test shape , Dimensions
CV 10x7,5: Test shape , Dimensions
CV 10x5: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
763206	242756	F	OS	HV10	221	229	225
763212	244684	F	OS	HV10	239	236	237
764342	245831	F	OS	HV10	211	218	213
764345	245828	F	OS	HV10	212	211	211
764349	245669	F	OS	HV10	222	237	216
868783	245769	F	OS	HV10	213	212	220
954831	241335	F	OS	HV10	213	212	218
954834	248945	F	OS	HV10	223	232	230
954835	241338	F	OS	HV10	252	257	252
956703	242753	F	OS	HV10	238	239	230
957237	242759	F	OS	HV10	225	221	224
958047	244740	F	OS	HV10	203	208	207

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>= Set values <=						440	440	440	25	25	25	35
763206	242756	Ø	9.98	F	S	573	573	571	81	82	79	81
763212	244684	Ø	10.02	F	S	560	559	559	83	79	81	81
764342	245831	Ø	10.01	F	S	583	582	581	82	79	83	81
764345	242446	Ø	9.99	F	S	595	595	596	83	84	83	83
764349	245669	Ø	9.99	F	S	621	617	619	75	77	77	76
868783	245769	Ø	10.01	F	S	584	585	584	84	82	82	83
954831	241335	Ø	9.98	F	S	564	567	564	82	82	84	83
954834	248945	Ø	9.97	F	S	574	574	573	81	83	82	82
954835	241338	Ø	9.92	F	S	570	570	565	84	82	82	83
956703	242753	Ø	9.99	F	S	571	570	570	81	82	81	81
957237	242759	Ø	9.99	F	S	553	552	554	80	80	79	80
958047	244728	Ø	9.99	F	S	583	587	585	82	81	81	81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
764349	245669	.053	.354	1.590	.004	.0009	.040	.168	.170	.004	.159	.004	.036	.013	.0042	.0003	.0020	.0021	.0020	.0020
958047	243261	.033	.335	1.610	.005	.0007	.042	.172	.180	.004	.160	.003	.036	.012	.0051	.0003	.0020	.0022	.0020	.0020
	244728	.033	.328	1.600	.005	.0007	.037	.168	.180	.003	.159	.003	.036	.011	.0044	.0003	.0020	.0018	.0020	.0020
	245805	.034	.333	1.590	.005	.0009	.040	.172	.180	.004	.157	.003	.036	.011	.0052	.0002	.0020	.0023	.0020	.0020
	250574	.035	.333	1.600	.005	.0006	.041	.168	.180	.004	.156	.003	.035	.011	.0048	.0002	.0020	.0020	.0020	.0020
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
763206	242756	.039	.337	1.620	.005	.0014	.040	.192	.170	.004	.158	.004	.039	.012	.0083	.0003	.0020	.0021	.0030	.0020
763212	241340	.031	.321	1.610	.007	.0004	.036	.181	.170	.005	.158	.004	.035	.010	.0050	.0002	.0020	.0016	.0030	.0020
764342	245799	.027	.349	1.620	.007	.0008	.034	.190	.170	.011	.165	.004	.036	.013	.0056	.0002	.0020	.0022	.0020	.0020
	245827	.026	.345	1.610	.007	.0006	.035	.185	.170	.011	.164	.004	.035	.013	.0052	.0002	.0020	.0023	.0020	.0020
	245831	.026	.347	1.620	.007	.0008	.035	.187	.170	.010	.165	.004	.036	.013	.0055	.0002	.0020	.0020	.0020	.0020
	246598	.030	.345	1.630	.007	.0012	.033	.189	.180	.011	.168	.004	.036	.013	.0055	.0003	.0020	.0021	.0020	.0030
764345	245819	.030	.350	1.640	.011	.0014	.044	.185	.180	.005	.159	.004	.036	.012	.0058	.0002	.0020	.0015	.0020	.0020
	245828	.030	.350	1.640	.011	.0013	.045	.184	.180	.005	.158	.004	.036	.012	.0061	.0002	.0020	.0015	.0020	.0020
764349	245669	.053	.354	1.590	.004	.0009	.040	.168	.170	.004	.159	.004	.036	.013	.0042	.0003	.0020	.0021	.0020	.0020
	247825	.055	.354	1.600	.004	.0008	.039	.169	.170	.004	.160	.004	.036	.013	.0038	.0003	.0020	.0022	.0020	.0020
868783	245769	.027	.340	1.620	.009	.0012	.038	.183	.180	.006	.163	.003	.036	.012	.0060	.0002	.0020	.0015	.0020	.0020
	245817	.027	.341	1.630	.008	.0011	.036	.182	.170	.007	.166	.003	.037	.013	.0058	.0002	.0020	.0017	.0020	.0020
954831	241335	.032	.323	1.620	.007	.0008	.038	.179	.170	.008	.160	.003	.035	.013	.0052	.0002	.0020	.0020	.0020	.0020
954834	248945	.035	.332	1.630	.008	.0008	.034	.179	.170	.007	.162	.004	.037	.013	.0058	.0002	.0020	.0017	.0020	.0020
954835	241338	.027	.320	1.620	.008	.0007	.038	.179	.170	.009	.157	.004	.035	.013	.0044	.0002	.0030	.0017	.0020	.0020
956703	242753	.030	.341	1.640	.007	.0014	.037	.185	.180	.009	.165	.006	.036	.012	.0070	.0004	.0020	.0020	.0020	.0020
957237	242759	.032	.339	1.620	.007	.0012	.046	.176	.170	.004	.163	.005	.035	.012	.0068	.0003	.0020	.0017	.0020	.0020
958047	244728	.033	.328	1.600	.005	.0007	.037	.168	.180	.003	.159	.003	.036	.011	.0044	.0003	.0020	.0018	.0020	.0020
	245805	.034	.333	1.590	.005	.0009	.040	.172	.180	.004	.157	.003	.036	.011	.0052	.0002	.0020	.0023	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
>=							
Set values <=		.0100	.41	.23	.090	.110	.900
764349	245669	.0020	.38	.17	.040	.053	.501
958047	243261	.0020	.36	.15	.039	.051	.516
	244728	.0020	.36	.15	.039	.050	.510
	245805	.0020	.36	.15	.039	.050	.513
	250574	.0020	.36	.15	.038	.049	.508
>=							
Set values <=		.0100	.41	.22	.090	.110	.900
763206	242756	.0020	.37	.15	.043	.055	.524
763212	241340	.0020	.36	.14	.039	.049	.514
764342	245799	.0020	.36	.14	.040	.053	.536
	245827	.0020	.36	.14	.039	.052	.530
	245831	.0020	.36	.14	.040	.053	.532
	246598	.0020	.37	.15	.040	.053	.548
764345	245819	.0020	.36	.15	.040	.052	.529
	245828	.0020	.36	.15	.040	.052	.527
764349	245669	.0020	.38	.17	.040	.053	.501
	247825	.0020	.38	.17	.040	.053	.503
868783	245769	.0020	.36	.14	.039	.051	.532
	245817	.0020	.36	.14	.040	.053	.525
954831	241335	.0020	.36	.15	.038	.051	.517
954834	248945	.0020	.37	.15	.041	.054	.518
954835	241338	.0020	.36	.14	.039	.052	.515
956703	242753	.0020	.37	.15	.042	.054	.539
957237	242759	.0020	.36	.15	.040	.052	.513
958047	244728	.0020	.36	.15	.039	.050	.510
	245805	.0020	.36	.15	.039	.050	.513

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %

LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

Remarks

Simulated heat treatment of test coupons:

Item 150:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 160:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 170:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 150, 160, 170
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MARCEGAGLIA PLATES SPA	1724000962	123B00C	Q012400476

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 25/06/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

A 01

MARCEGAGLIA PLATES

Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

A 02

INSPECTION CERTIFICATE 3.2 EN10204:2004

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA

A 03	Certificate Nr.	date	Page Nr.
	68ML170624	17/06/24	1/2

A 07 Purchase order: 1724000962
A 08 Marcegaglia P.O.: 1191763565
Delivery Nr.: of
Delivery Note Nr.:

B 01 Product : Hot Rolled Heavy Plates
B 02 Norm : EN10025-2: 2019
Steel grade : 1.0577 - S355J2+N - Z35

B06 MARKINGS: according to EN10025-1:2004
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

B 04 Delivery condition: +N Normalized rolled

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2019								IMPACT TEST - EN ISO 148-1:2016									Z Test - EN 10164 - Z35			
ITEM	B 07 Plate Id Nr	B 09 Dimensions (mm)	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	C 01 (2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	C 01 (2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J	C 31 Z1 %	C 31 Z2 %	C 31 Z3 %	C 32 Mean Value Z
1	24E9008247	20	2500	12000	441102	4,71																						
2	24E9008248	20	2500	12000	441102	4,71	6802	FLAT	1	P	T	RT	562	443		28,2	10 mm	1	P	L	-20	232	240	241	238	59	44	53	52
3	24E9008246	20	2500	12000	442256	4,71																						
4	24EP012615	20	2500	12000	442256	4,71																						
5	24EP012616	20	2500	12000	442256	4,71																						
6	24EP012617	25	2500	12000	442256	5,89																						
7	24EP012618	25	2500	12000	442256	5,89	6807	FLAT	1	P	T	RT	544	425		23,5	10 mm	1	P	L	-20	229	238	175	214	60	56	57	58
8	24EW002140	25	2500	12000	442256	5,89																						

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis / (*) Product Analysis (1)

C 00 Sample	B 07 Heat Nr	C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	441102	0,16	1,50	0,21	0,004	0,015	0,010	0,010	0,010	0,041	0,000	0,031	0,001	0,002	0,004	0,41
	442256	0,16	1,48	0,21	0,004	0,014	0,010	0,010	0,020	0,033	0,000	0,033	0,000	0,003	0,003	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. A2

D 02 ULTRASONIC EXAMINATION (1)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
1	24E9008247	20	2500	12000	441102	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
2	24E9008248	20	2500	12000	441102	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
3	24E9008246	20	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
4	24EP012615	20	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
5	24EP012616	20	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
6	24EP012617	25	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
7	24EP012618	25	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
8	24EW002140	25	2500	12000	442256	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°

0474
MARCEGAGLIA PLATES
v. Enrico Fermi, 33
33058 - S. Giorgio Nogaro
Udine - Italy
EN 10025-1
EN 10025-2

1244
22
MARCEGAGLIA PLATES
v. Enrico Fermi, 33
33058 - S. Giorgio Nogaro
Udine - Italy
EN 10025-1
EN 10025-2

Signature:
III liv. EN ISO 9712:2022
M. Quargnali

Remarks:

- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- Mechanical Tests performed at Marcegaglia Plates Lab. Test Report Nr. 24.068
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body

TÜV AUSTRIA ITALIA 029
☑ Witnessed ☑ Reviewed (1)
Ing. M. Polichetti
17 GIU 2024

Z 02 Quality Control
Q.M.D. M. QUARGNALI

MARCEGAGLIA PLATES
Michele Quargnali

A 01

MARCEGAGLIA PLATES

Via: E.Fermi, 33 33058 San Giorgio di Nogaro - UD- Italy
tel. +39 0431 624201- Fax 0431 624 222

A 02 **INSPECTION CERTIFICATE 3.2 EN10204:2004**

A 06 Customer:
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA

A 03	Certificate Nr.	date	Page Nr.
	68ML170624	17/06/24	2/2

A 07 Purchase order: 1724000962
A 08 Marcegaglia P.O.: 1191763565
Delivery Nr.: of
Delivery Note Nr.:

B 04 Delivery condition: +N Normalized rolled

B 01 Product : Hot Rolled Heavy Plates
B 02 Norm : EN10025-2: 2019
Steel grade : 1.0577 - S355J2+N

B06 MARKINGS: according to EN10025-1:2004
DIE STAMPING: Manufacturer Trademark, applicable Steel Grade, Heat Nr, Plate ID Nr

C 70 Steelmaking process: BOF = basic oxigen furnace

B 08	DESCRIPTION							TENSILE TEST - EN ISO 6892-1:2019								IMPACT TEST - EN ISO 148-1:2016								
ITEM	B 07 Plate Id Nr	B 09	B 10	B 11	B 07 Heat Nr	B 12 Weight Ton	C 00 Sample	C 10 Shape	C 01 (1)	C 01 (2)	C 02 (3)	C 03 (4)	C 12 Rm Mpa	C 11 ReH Mpa	C 11 Rp 0,2 Mpa	C 13 E %	C 41 Width	C 01 (1)	C 01 (2)	C 02 (3)	C 03 (4)	C 42 Kv J	C 42 Kv J	C 42 Kv J	C 43 Mean Value J
		Dimensions (mm)																						
9	24EP012614	10	2500	12000	2371633	2,36																		
10	24EW002136	10	2500	12000	2371633	2,36																		
11	24EP012611	12	2500	12000	2371633	2,83																		
12	24EP012612	12	2500	12000	2371633	2,83																		
13	24EP012613	12	2500	12000	2371633	2,83	6813	FLAT	1	P	T	RT	574	479		26,8	10 mm	1	P	L	-20	189	175	196	187

(1) LOCATION: 1=Top; 2= Bottom. (2) LOCATION: 1/2=1/2 thickness; P=surface; 1/4=1/4 thickness. (3) DIRECTION, L=longitudinal; T= Transverse. (4) Test temperature, RT = Room Temperature.

CHEMICAL COMPOSITION - Heat Analysis / (*) *Product Analysis* (1)

C 00 Sample	B 07 Heat Nr	C 71 C	C 72 Mn	C 73 Si	C 74 S	C 75 P	C 76 Cr	C 77 Ni	C 78 Cu	C 79 Al	C 80 Mo	C 81 Nb	C 82 V	C 83 Ti	C 84 N	C 85 Ceq
	2371633	0,16	1,45	0,18	0,005	0,008	0,021	0,023	0,035	0,032	0,002	0,026	0,001	0,001	0,005	0,41

Z 01

Thickness Tollerance	Flatness	Surface Quality
acc. To EN 10029 Cl.B	acc. To EN 10029 Cl.N	acc. To EN 10163 cl. A2

D 02 ULTRASONIC EXAMINATION (1)

INSTRUMENT: MAKE and MODEL	SERIAL NO.	SURFACE CONDITION	COUPLANT	PROCEDURE	CALIBRATION	FREQUENCY	ANGLE
GILARDONI RDG/700	I002993	AS ROLLED	WATER	ACCORDING TO SPECIFICATION	ACCORDING TO SPECIFICATION		

	Id. Plate	Dimensions			Heat	Standard of reference	Acceptance criteria	INDICATIONS	Scanning grid Reticle	Scanning grid Edges	PROBE	FREQUENCY	ANGLE
9	24EP012614	10	2500	12000	2371633	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
10	24EW002136	10	2500	12000	2371633	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
11	24EP012611	12	2500	12000	2371633	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
12	24EP012612	12	2500	12000	2371633	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°
13	24EP012613	12	2500	12000	2371633	EN 10160	S2E3	No record indication found	100 x 100 mm	50	BDD20/4	4 MHz	0°

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy
EN 10025-1
EN 10025-2
UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy
EN 10025-1
EN 10025-2

Signature:
III liv. EN ISO 9712:2022
M. Quargnali

Remarks:

- Material free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We declare that the above mentioned plates are in compliance with the order prescriptions
- Mechanical Tests performed at Marcegaglia Plates Lab. Test Report Nr. 24.068
- We hereby declare that the above mentioned material have been rolled in Italy, thus of European Community origin
- Code numbers according to EN10168:2004

Z 03 Inspection Body
TÜV AUSTRIA ITALIA 029
☑ Witnessed ☑ Reviewed (1)
Ing. M. Polichetti
17 GIU 2024

Z 02 Quality Control
Q.M.D. M. QUARGNALI
MARCEGAGLIA PLATES
Michele Quargnali

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Europe Steel Projects B.V.	1724001211	123B00	Q012400435

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.----------.
TMUGF Firma Data
MTSMD Signature Date
Sonia Emiliani 18/06/2024

Sonia Emiliani
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

EUROPE
STEEL
CENTER

Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132629
Our reference: L. Barelds
Your Po nr: 1724001211
Your VAT Nr: P.IVA 00082100397

Enquiry Reference: 123B00 - Q35 PLATES FOR BOX GIRDERS
Offer Reference: ESP0706LBrev00

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no	Plate no	MTC	HS Code	C.o.O.
10	Plates		8000	3000	25	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	8000	24	8	588,75	4.710,0	902878	376851-1	57785	72085120	Voest Alpine Austria
20	Plates		12000	3000	40	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	36	12	942,00	11.304,0	**26951**	**576228-1**	74003	72085120	Ilsenburg Germany
30	Plates		12000	2500	40	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	30	12	785,00	9.420,0	28748	576495-1	73996	72085120	Ilsenburg Germany
40	Plates		12000	2500	50	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	30	12	981,25	11.775,0	60302	576511-1	73994	72085120	Ilsenburg Germany
40	Plates		12000	2500	50	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	30	12	981,25	11.775,0	26954	576519-1	73986	72085120	Ilsenburg Germany
20	Plates		12000	3000	40	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	36	12	942,00	11.304,0	**26955**	**527699-1**	73244	72085120	Ilsenburg Germany
								6					**60.288,00**					

1617/ 3402

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

N141R4Y1-1

Z02 Date 03-01-2019

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0362745/A	A08 Order-No.:	8500785	A07 OrderDat.	22-08-2018 4F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460G2+M Z35 NORSOK MDS Y40

B03 Standard EN 10225 : 2009

A07 OrderNo. 6482

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

A10 - Supplementary information
STOCK ORDER

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
PLATES IN THICKNESS >12,5 MM UP TO <15 MM: MATERIAL IS ACCORDING TO EN10225 OPTIONS 2, 6, 12, 18 AND 28 // PLATES IN THICKNESS >=15 MM UP TO <=40 MM:MATERIALIS ACCORDING TO EN10225 OPTIONS 2, 6, 12, 13, 18 AND 28 // PLATES IN THICKNESS >40 MM UP TO <=100 MM: MATERIAL IS ACCORDING TO EN10225 OPTIONS 2, 6, 10, 12, 13, 18 AND 28.
MATERIAL IS PRE-QUALIFIED ACC. TO ANNEX E OF EN10225

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
708164	372692/1	160	50,00	2051,0	12000	1	9.711	76832		08-10-2018	S460MLNORZ35
708709	374255/1	90	30,00	3000,0	12000	1	8.624	76832		14-10-2018	S460MLNORZ35
708709	374256/1	90	30,00	3000,0	12000	1	8.625	76832		14-10-2018	S460MLNORZ35
708709	374257/1	90	30,00	3000,0	12000	1	8.599	76832		14-10-2018	S460MLNORZ35
708709	374258/1	90	30,00	3000,0	12000	1	8.628	76832		14-10-2018	S460MLNORZ35
708709	376730/1	50	25,00	3000,0	16000	1	9.617	76832		15-10-2018	S460MLNORZ35
708709	376731/1	50	25,00	3000,0	16000	1	9.610	76832		15-10-2018	S460MLNORZ35
708709	376832/1	60	25,00	3050,0	12000	1	7.331	76832		15-10-2018	S460MLNORZ35
708709	376833/1	60	25,00	3050,0	12000	1	7.353	76832		15-10-2018	S460MLNORZ35

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

NV

Issued at Vienna on 2019-01-03
for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Reinhard Siegmund
Surveyor

Z02
Inspection representative voestalpine Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
708709	376835/1	90	30,00	3000,0	12000	1		8.653	76832	14-10-2018	S460MLNORZ35
708709	376837/1	90	30,00	3000,0	12000	1		8.626	76832	14-10-2018	S460MLNORZ35
708709	376839/1	90	30,00	3000,0	12000	1		8.624	76832	14-10-2018	S460MLNORZ35
708709	376841/1	90	30,00	3000,0	12000	1		8.628	76832	20-10-2018	S460MLNORZ35
708709	376843/1	110	30,00	3050,0	12000	1		8.775	76788	15-10-2018	S460MLNORZ35
708709	376845/1	110	30,00	3050,0	12000	1		8.767	76788	15-10-2018	S460MLNORZ35
708709	376849/1	110	30,00	3050,0	12000	1		8.769	76832	14-10-2018	S460MLNORZ35
708709	376853/1	60	25,00	3050,0	12000	1		7.327	76788	15-10-2018	S460MLNORZ35
708709	376855/1	60	25,00	3050,0	12000	1		7.359	76832	15-10-2018	S460MLNORZ35
708709	377939/1	110	30,00	3050,0	12000	1		8.742	76788	14-10-2018	S460MLNORZ35
708710	376224/1	60	25,00	3050,0	12000	1		7.328	76788	17-10-2018	S460MLNORZ35
708710	376226/1	40	25,00	3000,0	12000	1		7.153	76832	15-10-2018	S460MLNORZ35
708710	376228/1	60	25,00	3050,0	12000	1		7.325	76832	15-10-2018	S460MLNORZ35
708710	376230/1	40	25,00	3000,0	12000	1		7.153	76832	15-10-2018	S460MLNORZ35
708710	376232/1	40	25,00	3000,0	12000	1		7.150	76832	15-10-2018	S460MLNORZ35
708710	376234/1	40	25,00	3000,0	12000	1		7.148	76832	15-10-2018	S460MLNORZ35
708710	376236/1	40	25,00	3000,0	12000	1		7.148	76832	15-10-2018	S460MLNORZ35
708710	376238/1	40	25,00	3000,0	12000	1		7.148	76832	17-10-2018	S460MLNORZ35
708710	376240/1	40	25,00	3000,0	12000	1		7.148	76832	15-10-2018	S460MLNORZ35
708710	376242/1	40	25,00	3000,0	12000	1		7.148	76832	15-10-2018	S460MLNORZ35
708710	376856/1	60	25,00	3050,0	12000	1		7.332	76832	15-10-2018	S460MLNORZ35
708710	376857/1	60	25,00	3050,0	12000	1		7.328	76832	15-10-2018	S460MLNORZ35
708710	376860/1	10	15,00	2500,0	12000	1		3.623	76788	15-10-2018	S460MLNORZ35
708710	376860/2	10	15,00	2500,0	12000	1		3.624	76788	15-10-2018	S460MLNORZ35
708710	376861/1	10	15,00	2500,0	12000	1		3.599	76788	14-10-2018	S460MLNORZ35
708710	376861/2	10	15,00	2500,0	12000	1		3.601	76788	14-10-2018	S460MLNORZ35
708710	376862/1	10	15,00	2500,0	12000	1		3.595	76788	14-10-2018	S460MLNORZ35
708710	376862/2	10	15,00	2500,0	12000	1		3.598	76788	14-10-2018	S460MLNORZ35
708710	376863/1	10	15,00	2500,0	12000	1		3.595	76788	14-10-2018	S460MLNORZ35
708710	376863/2	10	15,00	2500,0	12000	1		3.596	76788	14-10-2018	S460MLNORZ35
708710	376865/2	10	15,00	2500,0	12000	1		3.623	76832	14-10-2018	S460MLNORZ35
708710	376865/1	10	15,00	2500,0	12000	1		3.623	76832	14-10-2018	S460MLNORZ35
708808	376092/1	180	60,00	2500,0	16000	1		19.243	76832	21-10-2018	S460MLNORZ35
708808	376093/1	180	60,00	2500,0	16000	1		19.301	76832	22-10-2018	S460MLNORZ35

Z03
Stamp of the inspection representative

NV

Issued at Vienna on 2019-01-03
for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Reinhard Siegmund
Surveyor

Z02
Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
708808	376413/1	190	60,00	3000,0	12000	1		17.374	76832	15-10-2018	S460MLNORZ35
708808	386507/1	190	60,00	3000,0	12000	1		17.333	76788	19-11-2018	S460MLNORZ35
708808	386509/1	190	60,00	3000,0	12000	1		17.351	76788	19-11-2018	S460MLNORZ35
811374	372689/1	160	50,00	2051,0	12000	1		9.827	76832	02-10-2018	S460MLNORZ35
811374	372690/1	160	50,00	2051,0	12000	1		9.756	76915	02-10-2018	S460MLNORZ35
812934	379817/1	120	40,00	2051,0	12000	1		7.865	76915	25-10-2018	S460MLNORZ35
812934	379817/2	120	40,00	2051,0	12000	1		7.868	76832	25-10-2018	S460MLNORZ35
813006	379816/1	150	40,00	3750,0	13050	1		15.596	76832	19-11-2018	S460MLNORZ35
813721	384584/1	20	20,00	2051,0	12000	1		3.923	76788	16-11-2018	S460MLNORZ35
813722	378014/1	20	20,00	2051,0	12000	1		3.961	76832	12-10-2018	S460MLNORZ35
813722	378014/2	20	20,00	2051,0	12000	1		3.962	76832	12-10-2018	S460MLNORZ35
814693	386506/2	10	15,00	2500,0	12000	1		3.598	76832	13-11-2018	S460MLNORZ35
814693	386506/1	10	15,00	2500,0	12000	1		3.598	76832	13-11-2018	S460MLNORZ35
902338	376094/1	190	60,00	3000,0	12000	1		17.368	76832	15-10-2018	S460MLNORZ35
902528	379818/2	120	40,00	2051,0	12000	1		7.863	76832	31-10-2018	S460MLNORZ35
902528	379818/1	120	40,00	2051,0	12000	1		7.862	76832	31-10-2018	S460MLNORZ35
902530	372691/1	160	50,00	2051,0	12000	1		9.711	76788	08-10-2018	S460MLNORZ35
902876	375392/1	70	25,00	2980,0	16000	1		9.537	76832	02-11-2018	S460MLNORZ35
902876	375547/1	70	25,00	3050,0	16000	1		9.765	76832	15-10-2018	S460MLNORZ35
902876	376239/1	140	40,00	3050,0	12000	1		11.681	76832	12-10-2018	S460MLNORZ35
902876	376445/1	140	40,00	3050,0	12000	1		11.684	76788	09-10-2018	S460MLNORZ35
902876	376446/1	140	40,00	3050,0	12000	1		11.692	76788	12-10-2018	S460MLNORZ35
902876	376447/1	140	40,00	3050,0	12000	1		11.689	76832	09-10-2018	S460MLNORZ35
902876	376448/1	140	40,00	3050,0	12000	1		11.623	76832	12-10-2018	S460MLNORZ35
902876	376834/1	140	40,00	3050,0	12000	1		11.681	76788	15-10-2018	S460MLNORZ35
902876	377415/1	20	20,00	2051,0	12000	1		3.942	76832	12-10-2018	S460MLNORZ35
902876	377415/2	20	20,00	2051,0	12000	1		3.943	76832	12-10-2018	S460MLNORZ35
902876	379725/1	70	25,00	3050,0	16000	1		9.724	76832	25-10-2018	S460MLNORZ35
902876	379727/1	70	25,00	3050,0	16000	1		9.770	76832	22-10-2018	S460MLNORZ35
902878	376836/1	130	40,00	3000,0	12000	1		11.490	76832	16-10-2018	S460MLNORZ35
902878	376838/1	130	40,00	3000,0	12000	1		11.496	76832	12-10-2018	S460MLNORZ35
902878	376840/1	130	40,00	3000,0	12000	1		11.492	76832	13-10-2018	S460MLNORZ35
902878	376842/1	130	40,00	3000,0	12000	1		11.495	76832	11-10-2018	S460MLNORZ35
902878	376844/1	130	40,00	3000,0	12000	1		11.494	76788	15-10-2018	S460MLNORZ35

Z03
Stamp of the inspection representative

NV

Issued at Vienna on 2019-01-03
for DNV GL
This document has been digitally signed and will therefore not have handwritten signatures.
Reinhard Siegmund
Surveyor

Z02
Inspection representative voestalpine Grobblech
LINTNER Norbert

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
902878	376846/1	130	40,00	3000,0	12000	1		11.491	76788	29-10-2018	S460MLNORZ35
902878	376848/1	100	30,00	3000,0	16000	1		11.504	76832	15-10-2018	S460MLNORZ35
902878	376850/1	100	30,00	3000,0	16000	1		11.501	76832	15-10-2018	S460MLNORZ35
902878	376851/1	50	25,00	3000,0	16000	1		9.605	76832	15-10-2018	S460MLNORZ35
902878	376852/1	100	30,00	3000,0	16000	1		11.498	76832	15-10-2018	S460MLNORZ35
902878	376854/1	100	30,00	3000,0	16000	1		11.501	76832	15-10-2018	S460MLNORZ35
902878	376858/2	30	20,00	3050,0	12000	1		5.921	76832	15-10-2018	S460MLNORZ35
902878	376858/1	30	20,00	3050,0	12000	1		5.918	76832	15-10-2018	S460MLNORZ35
902878	376859/2	30	20,00	3050,0	12000	1		5.921	76832	15-10-2018	S460MLNORZ35
902878	376859/1	30	20,00	3050,0	12000	1		5.917	76832	15-10-2018	S460MLNORZ35
902878	378035/1	80	30,00	2051,0	12000	1		5.884	76832	15-10-2018	S460MLNORZ35
902878	378035/2	80	30,00	2051,0	12000	1		5.886	76832	15-10-2018	S460MLNORZ35
902878	378036/1	50	25,00	3000,0	16000	1		9.612	76788	15-10-2018	S460MLNORZ35
902933	376414/1	170	60,00	2500,0	12000	1		14.369	76788	18-10-2018	S460MLNORZ35
902933	376415/1	170	60,00	2500,0	12000	1		14.357	76832	26-10-2018	S460MLNORZ35
902933	376417/1	170	60,00	2500,0	12000	1		14.447	76832	27-10-2018	S460MLNORZ35
902933	376418/1	170	60,00	2500,0	12000	1		14.447	76788	17-10-2018	S460MLNORZ35
		Sum				94		832.291			

B14 - Supplementary information

width-deviation for plate(s) 375392/1: Customer accepted the deviation.

length-deviation for plate(s) 379816/1: Customer accepted the deviation.

B14 - Supplementary information

Dimensional tolerances acc. EN 10029/10
Flatness acc. EN 10029/10 class N
EN10163-2: Class A3 - Repair-welding not permitted.
Thicknesstolerance acc. EN 10029/10 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=		.150				.015																
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
708164	.035	.330	1.640	.005	.0003	.038	.170	.160	.025	.150	.005	.038	.012	.0049	.0002	.0060	.0020	.0020	.0020	.002	.37	.15
708709	.032	.332	1.600	.007	.0007	.045	.172	.170	.014	.163	.004	.038	.012	.0040	.0002	.0060	.0024	.0020	.0020	.002	.36	.14
708710	.032	.331	1.610	.008	.0004	.037	.173	.170	.019	.165	.004	.037	.012	.0031	.0003	.0060	.0018	.0030	.0020	.002	.36	.15
708808	.053	.180	1.560	.006	.0007	.033	.173	.520	.120	.025	.004	.025	.012	.0044	.0002	.0050	.0021	.0020	.0020	.002	.41	.16
811374	.030	.328	1.610	.007	.0007	.039	.168	.170	.014	.168	.003	.036	.014	.0048	.0002	.0070	.0020	.0020	.0020	.002	.36	.14
812934	.026	.317	1.600	.006	.0007	.038	.187	.170	.021	.163	.005	.036	.011	.0049	.0002	.0060	.0022	.0020	.0020	.002	.36	.14
813006	.031	.322	1.600	.006	.0011	.039	.173	.160	.030	.159	.004	.035	.012	.0040	.0002	.0020	.0021	.0020	.0020	.002	.36	.14
813721	.038	.342	1.610	.007	.0008	.044	.187	.180	.023	.164	.005	.035	.014	.0048	.0002	.0020	.0025	.0020	.0020	.002	.37	.15
813722	.033	.310	1.610	.006	.0007	.044	.180	.220	.031	.167	.005	.037	.014	.0043	.0002	.0020	.0017	.0020	.0020	.002	.37	.15
814693	.030	.328	1.600	.006	.0008	.040	.166	.170	.017	.162	.004	.036	.011	.0042	.0002	.0040	.0018	.0020	.0020	.002	.36	.14
902338	.053	.192	1.540	.007	.0010	.035	.180	.500	.128	.015	.007	.028	.010	.0046	.0002	.0060	.0012	.0020	.0030	.002	.41	.16
902528	.028	.330	1.590	.007	.0007	.032	.177	.180	.016	.156	.004	.035	.011	.0044	.0002	.0020	.0018	.0020	.0020	.002	.35	.14
902530	.035	.330	1.610	.007	.0007	.036	.172	.170	.016	.159	.006	.036	.010	.0049	.0002	.0020	.0021	.0020	.0020	.002	.36	.15
902876	.033	.331	1.610	.007	.0008	.036	.172	.180	.017	.170	.004	.037	.012	.0041	.0002	.0050	.0024	.0020	.0020	.002	.36	.15
902878	.030	.320	1.590	.007	.0008	.039	.172	.170	.017	.158	.004	.038	.012	.0038	.0002	.0060	.0018	.0020	.0020	.002	.36	.14
902933	.049	.206	1.540	.006	.0006	.033	.168	.520	.118	.023	.005	.025	.023	.0042	.0003	.0050	.0019	.0020	.0020	.002	.40	.16

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=	.090	.110	.900
708164	.043	.055	.505
708709	.042	.054	.519
708710	.041	.053	.527
708808	.029	.041	.838
811374	.039	.053	.520
812934	.041	.052	.541
813006	.039	.051	.522
813721	.040	.054	.554
813722	.042	.056	.598
814693	.040	.051	.515
902338	.035	.045	.823
902528	.039	.050	.529
902530	.042	.052	.517
902876	.041	.053	.539
902878	.042	.054	.517
902933	.030	.053	.829

C99 - Supplementary information
BI <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	Reh/Rm %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	460	550		17.0				
Set values <=							580	580	700			93.00	93.00		
708710	376860	30,0	15.05	F	O	T		577	659	A5	18.9		87.52		
	376862	30,0	15.06	F	O	T	538	534	596	A5	20.6	90.30	89.64		
814693	386506	30,0	15.17	F	O	T		575	659	A5	17.5		87.30		
>=							460	460	550		17.0				
Set values <=							580	580	700			90.00	90.00		
708164	372692	Ø	9.99	F	V	T		474	595	A5	27.1		79.65		
	372692	Ø	10.00	F	V	T		540	620	A5	25.9		87.17	001	1
708709	374256	30,0	30.53	F	O	T	533	527	594	A5	23.3	89.87	88.76		
	376832	30,0	25.38	F	O	T		564	631	A5	20.6		89.38		
	376833	30,0	25.35	F	O	T		545	611	A5	23.0		89.26		
	376843	30,0	30.64	F	O	T	545	542	607	A5	22.0	89.93	89.41		
	376855	30,0	25.69	F	O	T		543	604	A5	21.7		89.91		
	377939	30,0	30.86	F	O	T	531	523	599	A5	25.8	88.64	87.43		
708710	376224	30,0	25.69	F	O	T		552	623	A5	21.7		88.68		
	376228	30,0	25.28	F	O	T		521	589	A5	22.8		88.52		
	376230	30,0	24.97	F	O	T		561	626	A5	22.3		89.74		
	376234	30,0	25.49	F	O	T		544	610	A5	23.7		89.22		
	376238	30,0	25.58	F	O	T		541	610	A5	23.8		88.77		
	376856	30,0	25.29	F	O	T		536	605	A5	21.8		88.63		
708808	376093	30,0	41.51	F	O	T		471	596	A5	22.3		79.03		
	376413	30,0	41.52	F	O	T		469	599	A5	20.9		78.27		
	386509	30,0	40.22	F	O	T		478	606	A5	18.9		78.99		
	376093	30,0	41.52	F	O	T	517	512	597	A5	23.0	86.54	85.86	001	1
	376413	30,0	41.53	F	O	T	513	508	591	A5	24.6	86.69	85.85	001	1
	386509	30,0	41.49	F	O	T		523	603	A5	23.2		86.67	001	1
811374	372689	Ø	10.00	F	V	T		483	592	A5	26.5		81.57		
	372689	Ø	10.00	F	V	T		526	602	A5	26.7		87.39	001	1
812934	379817	30,0	40.50	F	O	T		470	585	A5	24.5		80.38		
813006	379816	30,0	40.62	F	O	T		533	611	A5	25.2		87.13		
813721	384584	30,0	20.18	F	O	T		565	633	A5	20.3		89.16		
813722	377287	30,0	19.69	F	O	T		543	641	A5	19.7		84.73		

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Test results: C10-C29 Tensile Test acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Reh/Rm %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						460	460	550		17.0				
Set values	<=						580	580	700			90.00	90.00		
902338	376094	30,0	39.40	F	O	T		470	584	A5	22.4		80.42		
	376094	30,0	41.52	F	O	T	511	507	592	A5	23.7	86.26	85.69	001	1
902528	379818	30,0	40.32	F	O	T		470	603	A5	24.4		77.87		
902530	372691	Ø	10.00	F	V	T		471	588	A5	26.3		80.13		
	372691	Ø	10.01	F	V	T		534	612	A5	25.0		87.32	001	1
902876	375547	30,0	25.33	F	O	T		509	581	A5	23.8		87.57		
	376445	30,0	41.96	F	O	T		491	613	A5	21.9		80.19		
	376446	30,0	41.07	F	O	T		473	599	A5	22.4		79.08		
	377412	30,0	19.85	F	O	T		543	609	A5	21.7		89.19		
	379725	30,0	24.82	F	O	T		542	606	A5	22.6		89.45		
902878	376838	30,0	40.67	F	O	T		509	597	A5	22.3		85.25		
	376846	30,0	40.43	F	O	T		479	586	A5	22.7		81.75		
	376851	30,0	25.26	F	O	T		535	604	A5	23.2		88.56		
	376852	30,0	30.77	F	O	T		534	601	A5	23.0		88.94		
	376859	30,0	20.71	F	O	T		530	598	A5	23.7		88.61		
	378035	30,0	30.63	F	O	T		533	595	A5	24.4		89.61		
	378036	30,0	25.39	F	O	T		520	586	A5	24.2		88.68		
902933	376415	30,0	41.07	F	O	T		478	602	A5	20.7		79.48		
	376417	30,0	41.08	F	O	T		500	614	A5	22.5		81.40		
	376415	30,0	41.56	F	O	T	519	516	599	A5	22.4	86.66	86.21	001	1
	376417	30,0	41.53	F	O	T	543	542	616	A5	24.0	88.25	88.00	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge

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Test results: C10-C29 Tensile Test acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Reh/Rm %	C11 Rp0,2/Rm %	Sim.htm	WBH

A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	29	29	29	46			
Set values <=													
708164	372692	CV 10x10	F	ZB2	T	-40	322	327	298	316		strain aged 5%, 60 min. at 250°C	
708709	376832	CV 10x10	F	ZB2	T	-40	317	318	316	317		strain aged 5%, 60 min. at 250°C	
708710	376856	CV 10x10	F	ZB2	T	-40	326	303	306	312		strain aged 5%, 60 min. at 250°C	
	376862	CV 10x10	F	ZB2	T	-40	325	328	335	329		strain aged 5%, 60 min. at 250°C	
708808	376413	CV 10x10	F	ZB2	T	-40	287	289	226	267		strain aged 5%, 60 min. at 250°C	
811374	372689	CV 10x10	F	ZB2	T	-40	64	62	51	59		strain aged 5%, 60 min. at 250°C	
812934	379817	CV 10x10	F	ZB2	T	-40	308	332	311	317		strain aged 5%, 60 min. at 250°C	
813006	348137	CV 10x10	F	ZB2	T	-40	308	300	294	301		strain aged 5%, 60 min. at 250°C	
813721	384584	CV 10x10	F	ZB2	T	-40	275	294	313	294		strain aged 5%, 60 min. at 250°C	
813722	378014	CV 10x10	F	ZB2	T	-40	320	328	325	324		strain aged 5%, 60 min. at 250°C	
814693	386506	CV 10x10	F	ZB2	T	-40	315	138	131	195		strain aged 5%, 60 min. at 250°C	
902338	376094	CV 10x10	F	ZB2	T	-40	303	234	298	278		strain aged 5%, 60 min. at 250°C	
902528	379818	CV 10x10	F	ZB2	T	-40	293	284	297	291		strain aged 5%, 60 min. at 250°C	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
902530	372691	CV 10x10	F	ZB2	T	-40	332	42	334	236			strain aged 5%, 60 min. at 250°C
902876	376445	CV 10x10	F	ZB2	T	-40	295	114	305	238			strain aged 5%, 60 min. at 250°C
902878	378035	CV 10x10	F	ZB2	T	-40	310	324	315	317			strain aged 5%, 60 min. at 250°C
902933	376415	CV 10x10	F	ZB2	T	-40	304	254	126	228			strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60			
708164	372692	CV 10x10	F	O	T	-40	350	363	355	356			
	372692	CV 10x10	F	O	T	-40	296	292	283	290	001	1	
	372692	CV 10x10	F	K	T	-40	360	363	333	352			
	372692	CV 10x10	F	K	T	-40	330	312	325	322	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
708709	374256	CV 10x10	F	O	T	-40	353	345	355	351			
	376832	CV 10x10	F	O	T	-40	346	345	351	347			
	376833	CV 10x10	F	O	T	-40	342	354	358	351			
	376843	CV 10x10	F	O	T	-40	359	341	346	349			
	377939	CV 10x10	F	O	T	-40	352	362	358	357			
708710	376230	CV 10x10	F	O	T	-40	343	344	342	343			
	376856	CV 10x10	F	O	T	-40	346	351	352	350			
	376860	CV 10x10	F	O	T	-40	352	352	353	352			
	376862	CV 10x10	F	O	T	-40	347	350	345	347			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
	Set values <=												
708808	376413	CV 10x10	F	O	T	-40	326	321	318	322			
	386509	CV 10x10	F	O	T	-40	323	330	294	316			
	376413	CV 10x10	F	O	T	-40	283	279	286	283	001	1	
	386509	CV 10x10	F	O	T	-40	298	303	211	271	001	1	
	376413	CV 10x10	F	K	T	-40	319	329	276	308			
	386509	CV 10x10	F	K	T	-40	338	324	322	328			
	376413	CV 10x10	F	K	T	-40	246	241	238	242	001	1	
	386509	CV 10x10	F	K	T	-40	293	293	292	293	001	1	
811374	372689	CV 10x10	F	O	T	-40	350	352	355	353			
	372689	CV 10x10	F	O	T	-40	294	63	281	213	001	1	
	372689	CV 10x10	F	K	T	-40	372	349	378	366			
	372689	CV 10x10	F	K	T	-40	125	273	67	155	001	1	
812934	379817	CV 10x10	F	O	T	-40	374	376	372	374			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
Set values	<=												
813006	379816	CV 10x10	F	O	T	-40	376	391	389	385			
813721	384584	CV 10x10	F	O	T	-40	47	316	335	233			
813722	377287	CV 10x10	F	O	T	-40	365	365	371	367			
814693	386506	CV 10x10	F	O	T	-40	372	315	357	348			
902338	376094	CV 10x10	F	O	T	-40	337	330	321	330			
	376094	CV 10x10	F	O	T	-40	301	256	300	285	001	1	
	376094	CV 10x10	F	K	T	-40	304	344	326	324			
	376094	CV 10x10	F	K	T	-40	246	315	303	288	001	1	
902528	379818	CV 10x10	F	O	T	-40	345	371	361	359			
902530	372691	CV 10x10	F	O	T	-40	366	374	366	369			
	372691	CV 10x10	F	O	T	-40	298	282	299	293	001	1	
	372691	CV 10x10	F	K	T	-40	360	369	367	365			
	372691	CV 10x10	F	K	T	-40	320	313	297	310	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
902876	375547	CV 10x10	F	O	T	-40	352	329	355	345			
	376445	CV 10x10	F	O	T	-40	352	349	345	348			
	376446	CV 10x10	F	O	T	-40	346	335	350	344			
	377412	CV 10x10	F	O	T	-40	352	349	359	353			
	379725	CV 10x10	F	O	T	-40	370	367	367	368			
902878	376838	CV 10x10	F	O	T	-40	351	366	353	357			
	376846	CV 10x10	F	O	T	-40	354	355	363	358			
	376851	CV 10x10	F	O	T	-40	347	342	349	346			
	376852	CV 10x10	F	O	T	-40	355	353	357	355			
	376859	CV 10x10	F	O	T	-40	357	355	356	356			
	378035	CV 10x10	F	O	T	-40	357	346	363	356			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
902933	376415	CV 10x10	F	O	T	-40	328	328	329	328			
	376417	CV 10x10	F	O	T	-40	326	328	271	308			
	376415	CV 10x10	F	O	T	-40	250	308	301	286	001	1	
	376417	CV 10x10	F	O	T	-40	265	254	261	260	001	1	
	376415	CV 10x10	F	K	T	-40	273	283	258	271			
	376417	CV 10x10	F	K	T	-40	138	258	289	228			
	376415	CV 10x10	F	K	T	-40	259	230	190	226	001	1	
	376417	CV 10x10	F	K	T	-40	245	48	238	177	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
708164	372692	F	OS	HV10	223	224	227
708709	376832	F	OS	HV10	218	214	211
708710	376862	F	OS	HV10	210	216	206
708808	376413	F	OS	HV10	242	240	241
811374	372689	F	OS	HV10	207	212	206
812934	379817	F	OS	HV10	211	209	201
813006	348137	F	OS	HV10	217	219	214
813721	384584	F	OS	HV10	216	217	215
813722	378014	F	OS	HV10	205	204	206
814693	386496	F	OS	HV10	211	217	216
902338	376094	F	OS	HV10	285	273	277
902528	379818	F	OS	HV10	229	224	224
902530	372691	F	OS	HV10	236	235	237
902876	376445	F	OS	HV10	205	203	201
902878	378035	F	OS	HV10	201	202	198
902933	376415	F	OS	HV10	223	225	224

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test acc. DIN / EN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						440	440	440	25	25	25	35
Set values <=												
708164	372692	Ø	9.98	F	S	581	578	579	80	82	80	81
708709	376832	Ø	9.99	F	S	605	608	605	83	83	81	82
708710	376856	Ø	9.99	F	S	597	596	597	81	81	82	81
	376862	Ø	6.01	F	S	639	640	639	80	80	79	80
708808	376413	Ø	10.01	F	S	596	593	595	81	80	80	80
811374	372689	Ø	9.99	F	S	568	572	571	81	81	83	82
812934	379817	Ø	10.00	F	S	569	570	568	77	81	83	80
813006	348137	Ø	10.00	F	S	566	568	566	80	79	81	80
813721	384584	Ø	5.99	F	S	637	639	643	82	83	82	82
813722	377287	Ø	5.97	F	S	638	646	647	76	72	76	75
814693	386506	Ø	6.00	F	S	641	640	642	79	78	78	78
902338	374531	Ø	10.01	F	S	593	591	592	80	80	79	80
902528	379818	Ø	9.99	F	S	575	574	574	81	81	82	81
902530	372691	Ø	9.98	F	S	557	560	559	82	81	83	82
902876	376445	Ø	10.01	F	S	583	583	581	80	80	81	80
	377412	Ø	5.97	F	S	608	606	608	77	76	78	77
902878	376859	Ø	6.01	F	S	606	605	608	80	79	78	79
	378035	Ø	9.95	F	S	580	581	582	84	81	82	82
902933	376415	Ø	10.01	F	S	590	590	589	78	81	82	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=		.150				.015													
Set values	<=	.150	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
708164	372692	.036	.328	1.640	.006	.0009	.043	.179	.170	.027	.158	.005	.040	.012	.0047	.0002	.0020	.0021	.0020	.0020
708709	374255	.030	.331	1.600	.007	.0005	.045	.169	.170	.013	.165	.004	.036	.013	.0042	.0002	.0020	.0026	.0030	.0020
	376832	.032	.331	1.600	.007	.0006	.041	.175	.170	.016	.166	.004	.036	.012	.0036	.0002	.0020	.0020	.0020	.0020
	376833	.032	.328	1.600	.007	.0007	.039	.176	.170	.017	.166	.004	.037	.012	.0035	.0002	.0020	.0020	.0030	.0020
	376843	.030	.333	1.600	.007	.0007	.047	.169	.170	.013	.165	.004	.037	.013	.0036	.0002	.0020	.0022	.0020	.0020
	376853	.030	.333	1.600	.007	.0005	.047	.169	.170	.013	.164	.004	.036	.013	.0034	.0002	.0020	.0022	.0020	.0020
708710	376236	.033	.330	1.620	.008	.0006	.037	.174	.170	.019	.169	.004	.037	.013	.0036	.0002	.0020	.0018	.0020	.0020
	376861	.033	.331	1.620	.008	.0006	.037	.173	.170	.019	.167	.004	.037	.013	.0037	.0002	.0020	.0018	.0030	.0020
	376862	.033	.327	1.620	.007	.0006	.037	.172	.170	.019	.166	.004	.037	.013	.0039	.0002	.0020	.0019	.0020	.0020
	378622	.034	.330	1.610	.008	.0003	.036	.171	.170	.019	.166	.004	.037	.012	.0031	.0002	.0020	.0016	.0020	.0020
708808	376413	.054	.181	1.540	.006	.0008	.034	.173	.520	.122	.025	.005	.024	.012	.0042	.0002	.0020	.0023	.0020	.0030
	386509	.054	.182	1.540	.006	.0010	.035	.172	.520	.124	.024	.005	.024	.012	.0037	.0002	.0020	.0022	.0020	.0030
811374	372689	.029	.336	1.590	.007	.0009	.044	.182	.180	.019	.168	.003	.039	.015	.0044	.0002	.0020	.0020	.0020	.0020
812934	379817	.030	.326	1.580	.006	.0010	.037	.188	.170	.021	.164	.005	.036	.011	.0054	.0003	.0020	.0026	.0030	.0020
813006	348137	.030	.328	1.620	.007	.0013	.045	.182	.170	.032	.159	.005	.037	.013	.0037	.0002	.0020	.0020	.0020	.0020
813721	378818	.039	.345	1.600	.007	.0007	.043	.183	.180	.022	.163	.005	.036	.014	.0048	.0003	.0020	.0022	.0020	.0020
813722	374002	.032	.313	1.590	.006	.0008	.044	.180	.220	.031	.167	.004	.039	.014	.0038	.0002	.0020	.0015	.0020	.0020
814693	386306	.033	.327	1.610	.006	.0007	.041	.168	.170	.018	.163	.004	.036	.012	.0037	.0002	.0020	.0016	.0020	.0020
902338	376094	.051	.186	1.530	.007	.0009	.032	.176	.510	.127	.017	.006	.029	.010	.0042	.0002	.0020	.0013	.0020	.0020
902528	379818	.044	.369	1.550	.006	.0010	.039	.171	.250	.025	.160	.004	.026	.013	.0047	.0002	.0020	.0015	.0020	.0020
902530	372691	.033	.324	1.610	.007	.0009	.037	.168	.170	.016	.158	.005	.037	.010	.0037	.0002	.0020	.0019	.0020	.0020
902876	375547	.031	.331	1.610	.007	.0008	.034	.171	.180	.017	.173	.004	.036	.012	.0045	.0002	.0020	.0022	.0030	.0020
	376445	.031	.323	1.580	.007	.0008	.034	.170	.180	.017	.169	.004	.036	.012	.0040	.0002	.0020	.0023	.0020	.0020
	376448	.031	.327	1.600	.007	.0008	.034	.169	.180	.017	.172	.004	.035	.012	.0043	.0002	.0020	.0022	.0030	.0020
	379727	.031	.325	1.600	.007	.0008	.034	.169	.180	.017	.171	.004	.035	.012	.0034	.0002	.0020	.0024	.0020	.0020
902878	376842	.029	.320	1.590	.007	.0008	.038	.173	.170	.017	.162	.004	.038	.012	.0035	.0002	.0020	.0017	.0020	.0020
	376844	.029	.323	1.590	.007	.0008	.039	.173	.170	.017	.159	.004	.036	.012	.0036	.0002	.0020	.0017	.0030	.0020
	376851	.030	.331	1.600	.007	.0006	.044	.174	.170	.015	.163	.004	.037	.013	.0036	.0002	.0020	.0022	.0020	.0020
	376854	.029	.324	1.600	.007	.0007	.040	.171	.170	.017	.159	.004	.037	.012	.0037	.0002	.0020	.0018	.0020	.0020
	378035	.029	.320	1.590	.007	.0007	.039	.169	.170	.016	.159	.004	.036	.012	.0031	.0002	.0020	.0017	.0020	.0020
902933	376415	.051	.184	1.530	.006	.0008	.035	.171	.520	.121	.024	.005	.027	.015	.0041	.0002	.0020	.0021	.0020	.0030
	376417	.049	.193	1.520	.006	.0007	.036	.170	.520	.120	.023	.005	.027	.020	.0042	.0002	.0020	.0022	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
Set values >= <=		.010	.43	.22	.090	.110	.900
708164	372692	.002	.37	.15	.045	.057	.534
708709	374255	.002	.36	.14	.040	.053	.517
	376832	.002	.36	.15	.040	.052	.527
	376833	.002	.36	.15	.041	.053	.529
	376843	.002	.36	.14	.041	.054	.517
	376853	.002	.36	.14	.040	.053	.516
708710	376236	.002	.37	.15	.041	.054	.532
	376861	.002	.36	.15	.041	.054	.529
	376862	.002	.36	.15	.041	.054	.527
	378622	.002	.36	.15	.041	.053	.526
708808	376413	.002	.41	.17	.029	.041	.840
	386509	.002	.41	.17	.029	.041	.840
811374	372689	.002	.36	.14	.042	.057	.549
812934	379817	.002	.36	.14	.041	.052	.543
813006	348137	.002	.37	.15	.042	.055	.543
813721	378818	.002	.37	.15	.041	.055	.548
813722	374002	.002	.37	.15	.043	.057	.598
814693	386306	.002	.36	.15	.040	.052	.519
902338	376094	.002	.40	.16	.035	.045	.830
902528	379818	.002	.37	.16	.030	.043	.606
902530	372691	.002	.36	.15	.042	.052	.512
902876	375547	.002	.36	.15	.040	.052	.541
	376445	.002	.36	.14	.040	.052	.536
	376448	.002	.36	.14	.039	.051	.538
	379727	.002	.36	.14	.039	.051	.537
902878	376842	.002	.35	.14	.042	.054	.522
	376844	.002	.35	.14	.040	.052	.519
	376851	.002	.36	.14	.041	.054	.522
	376854	.002	.36	.14	.041	.053	.517
	378035	.002	.35	.14	.040	.052	.514
902933	376415	.002	.40	.16	.032	.047	.836
	376417	.002	.40	.16	.032	.052	.833

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Pos 160-190:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2004, class Z35.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 160, 170, 180, 190
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
Seite/Page 1/8
Datum/Date 11.06.2024

Nr. (A07) Besteller Purchaser (A06)	Order 6946 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	28.03.2024	Nr. (A07) Empfänger Customer (A06) Order 6946 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE

Erzeugnis Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. Works order No. (A08): 0000118472

Lieferschein-Nr. Dispatch note No.: 0091486846, 11.06.2024

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme Inspection (A05): NV **N142VN2Y**

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
03	1	576228 1	26951	TM	40,00 x 3000,0 x 12000
Σ	1	Gewicht Weight (B12) 11.304 kg kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1641/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
Seite/Page 2/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07) Order 6946
Besteller	Kröger Staal B.V.		Empfänger Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK		Customer 4780 AA MOERDIJK
(A06)	NIEDERLANDE		(A06) NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091486846 vom 11.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Schmelzenanalyse / Ladle analysis (C70-C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,14	≤0,55	≤1,70	≤0,020	≤0,005	≤0,010	0,015-0,055	≤0,30	≤0,25	≤0,70
26951	0,08	0,21	1,60	0,013	0,001	0,004	0,039	0,23	0,05	0,36

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤0,08	≤0,025	≤0,050	≤0,0008	≤0,25	≤0,030	≤0,020	≤0,010	≤0,005	≤0,22
26951	0,04	0,003	0,035	0,0002	0,003	0,003	0,006	0,000	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤0,010	≤0,41	≤0,010	≤0,13		≤0,12
26951	0,001	0,40	0,000	0,08	0,64	0,08

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1642/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
Seite/Page 3/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091486846 / 11.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
576228	26951	0,08	0,20	1,62	0,016	0,000	0,005	0,034	0,24
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
576228	26951	0,06	0,38	0,032	0,001	0,032	0,001	0,0006	0,20
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12				
576228	26951	0,41	0,68	0,07	0,06				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1643/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
Seite/Page 4/8
Datum/Date 11.06.2024

Nr. (A07) Besteller Purchaser (A06)	Order 6946 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	28.03.2024	Nr. (A07) Empfänger Customer (A06) Order 6946 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE

Erzeugnis Product (B01) Grobblech / Heavy plate

Werksauftrags-Nr. Works order No. (A08) 0000118472

Lieferschein-Nr. Dispatch note No. 0091486846 / 11.06.2024

Abnahme Inspection (A05) NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03)
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 – 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 – 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
576228	26951	K4G	Q	TM	P	526	600	0,84	28	
576228	26951	K4G	Q	TS	P	536	602	0,87	23	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
   TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1644/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product / (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091486846 / 11.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV / **N142VN2Y**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)	
				% ≥ 25			% ≥ 35	
527840 *)	26951	K4	TM	58	73	62	64	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				MPa ≥ 416				
527840 *)	26951	K4	TM	585	585	579		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1645/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	Nr. (A07)	Order 6946
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

28.03.2024

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Werksauftrags-Nr. / Works order No. (A08): 0000118472
Lieferschein-Nr. / Dispatch note No.: 0091486846 11.06.2024
Abnahme / Inspection (A05): NV **N142VN2Y**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
527840 *)	26951	K4O	Q	A5	KV600	-040	231	242	242	238
576228	26951	K4O	Q	TM	KV600	-040	286	238	248	257
576228	26951	K4O	Q	TS	KV600	-040	217	213	269	233

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1646/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091486846 / 11.06.2024

Abnahme / Inspection (A05): NV / **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39)			
					HV10			
527840 *)	26951	K4		TM	182			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1647/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423218**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091486846 / 11.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1648/ 3402

73996

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 1/8
Datum/Date 11.06.2024

Nr. (A07) Order 6946 28.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6946
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118472
Works order No.
(A08)
Abnahme NV
Inspection **N142VN2Y**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
02	1	576495 1	28748	TM	40,00 x 2500,0 x 12000
02	1	576499 1*)	02885	TM	40,00 x 2500,0 x 10000
Σ	2	Gewicht Weight (B12) 17.270 kg kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

*) Lieferung gemäß der Tolerierungsanfrage Nr.: 1070022371
*) Delivery in accordance with tolerance request no.: 1070022371

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1649/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 2/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Abnahme / Inspection (A05): NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70–C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
02885	0,08	0,18	1,62	0,009	0,002	0,005	0,036	0,24	0,03	0,35
28748	0,08	0,19	1,60	0,008	0,001	0,005	0,038	0,22	0,03	0,35

Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
02885	0,04	0,001	0,037	0,0001	0,003	0,003	0,002	0,000	0,002	0,19
28748	0,04	0,001	0,034	0,0001	0,003	0,002	0,005	0,000	0,003	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12				
02885	0,000	0,40	0,000	0,08	0,62	0,08				
28748	0,000	0,40	0,000	0,08	0,60	0,07				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1650/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 3/8
Datum/Date 11.06.2024

Nr. (A07) Order 6946 28.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6946
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118472
Works order No.
(A08)
Abnahme NV
Inspection **N142VN2Y**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
576502 *)	02885	0,09	0,18	1,59	0,011	0,000	0,004	0,039	0,24
539195 *)	28748	0,09	0,20	1,57	0,010	0,002	0,005	0,038	0,23

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
576502 *)	02885	0,04	0,35	0,037	0,001	0,033	0,001	0,0003	0,20
539195 *)	28748	0,03	0,35	0,035	0,001	0,033	0,01	0,0002	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12
576502 *)	02885	0,41	0,63	0,07	0,07
539195 *)	28748	0,41	0,62	0,07	0,07

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1651/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 4/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Abnahme / Inspection (A05): NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 - 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 - 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
576495	28748	K4G	Q	TM	P	509	586	0,82	26	
576495	28748	K4G	Q	TS	P	536	587	0,86	27	
576499	02885	K4G	Q	TM	P	486	575	0,82	29	
576499	02885	K4G	Q	TS	P	502	573	0,83	26	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1652/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 5/8
Datum/Date 11.06.2024

Nr. (A07) Order 6946 28.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6946
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118472
Works order No.
(A08)
Abnahme NV
Inspection **N142VN2Y**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35	
576497 *)	28748	K4	TM	64	69	71	68	
576502 *)	02885	K4	TM	68	70	47	62	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥416	2	3		
576497 *)	28748	K4	TM	556	560	555		
576502 *)	02885	K4	TM	561	557	564		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1653/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 6/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Abnahme / Inspection (A05): NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
576497 *)	28748	K4O	Q	A5	KV600	-040	196	196	197	196
576497 *)	28748	K4O	Q	TM	KV600	-040	222	252	237	237
576497 *)	28748	K4O	Q	TS	KV600	-040	225	286	247	253
576502 *)	02885	K4O	Q	A5	KV600	-040	139	142	125	135
576502 *)	02885	K4O	Q	TM	KV600	-040	218	215	204	212
576502 *)	02885	K4O	Q	TS	KV600	-040	200	197	195	197

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1654/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Abnahme / Inspection (A05): NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
576497 *)	28748	K4		TM	172			
576502 *)	02885	K4		TM	178			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1655/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423211**
Seite/Page 8/8
Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01)	Grobblech / Heavy plate
Werksauftrags-Nr. / Works order No. (A08)	0000118472
Abnahme / Inspection (A05)	NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03)

S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.
EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.
EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 — ENVIRONMENT - SAFEGUARDING LIFE, PROPERTY AND THE

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ
Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1656/ 3402

73994

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091484723 10.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
06	1	576511 1	60302	TM	50,00 x 2500,0 x 12000
Σ	1	Gewicht / Weight (B12) 11.775 kg / kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1657/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07) Order 6946 28.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6946
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118472
Works order No.
(A08)
Lieferschein-Nr. 0091484723
Dispatch note No. 10.06.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142VN2Y**
(A05)

Schmelzenanalyse / Ladle analysis (C70–C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
60302	0,08	0,21	1,59	0,015	0,001	0,003	0,030	0,23	0,04	0,35
Schmelzen-Nr. Heat No. (B07)	V % ≤0,08	Ti % ≤0,025	Nb % ≤0,050	B % ≤0,0008	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,22
60302	0,03	0,003	0,035	0,0001	0,004	0,003	0,003	0,000	0,001	0,19
Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) % ≤0,41	Bi % ≤0,010	EV3 3) % ≤0,13	EV4 4) %	Nb+V % ≤0,12				
60302	0,001	0,40	0,000	0,07	0,62	0,07				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1658/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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Nr./No. (A03) **1423187**
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Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091484723 vom 10.06.2024

Abnahme / Inspection (A05): NV **N142VN2Y**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
576236 *)	60302	0,09	0,21	1,54	0,017	0,001	0,004	0,027	0,24
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
576236 *)	60302	0,03	0,37	0,028	0,003	0,039	0,004	0,0005	0,20
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12				
576236 *)	60302	0,40	0,64	0,07	0,07				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1659/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07) Order 6946 28.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6946
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118472
Works order No.
(A08)
Lieferschein-Nr. 0091484723
Dispatch note No. 10.06.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142VN2Y**
(A05)

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 - 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 - 675	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
576511	60302	K4G	Q	TM	P	512	616	0,83	23	
576511	60302	K4G	Q	TS	P	553	617	0,87	22	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1660/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091484723 / 10.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV / **N142VN2Y**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)	
				% ≥ 25			% ≥ 35	
576236 *)	60302	K4	TM	62	62	72	65	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				MPa ≥ 416				
576236 *)	60302	K4	TM	635	635	632		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1661/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
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(A02)

Nr./No. (A03) **1423187**
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Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091484723 10.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
576235 *)	60302	K4O	Q	TM	KV600	-040	257	272	250	260
576235 *)	60302	K4O	Q	TS	KV600	-040	203	207	227	212
576235 *)	60302	K4H	Q	TM	KV	-040	212	85	156	151
576235 *)	60302	K4H	Q	TS	KV600	-040	173	57	199	143
576236 *)	60302	K4O	Q	A5	KV600	-040	237	263	251	250
576236 *)	60302	K4O	Q	TM	KV600	-040	289	278	293	287
576236 *)	60302	K4O	Q	TS	KV600	-040	232	200	216	216
576236 *)	60302	K4H	Q	TM	KV	-040	178	97	49	108
576236 *)	60302	K4H	Q	TS	KV600	-040	124	47	153	108

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) H: 1/2 Dicke / 1/2 Thickness
O: oberflächennah / near surface
4) Q: quer / transversal
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1662/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946 28.03.2024	Nr. (A07)	Order 6946
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118472

Lieferschein-Nr. / Dispatch note No.: 0091484723 10.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN2Y**

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
576236 *)	60302	K4		TM	199			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1663/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1423187**
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Datum/Date 11.06.2024

Nr. (A07)	Order 6946	28.03.2024	Nr. (A07)	Order 6946	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis Product (B01)	Grobblech Heavy plate	Werksauftrags-Nr. Works order No. (A08)	0000118472
		Lieferschein-Nr. Dispatch note No.	0091484723 10.06.2024
Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03)	S460MLO Z35 DIN EN 10225-1 11/2019 MDS-Y40 Rev.6 DIN EN 10029 B 02/11 DIN EN 10163-2 Kl. B UG3 03/05 S460MLOILG	Abnahme Inspection (A05)	NV **N142VN2Y**

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1664/ 3402

73986

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 1/8
Datum/Date 10.06.2024

Nr. (A07)	Order 6943 12.03.2024	Nr. (A07)	Order 6943
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118262

Lieferschein-Nr. / Dispatch note No.: 0091482292 07.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN29**

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
04	1	576519 1	26954	TM	50,00 x 2500,0 x 12000
Σ	1	Gewicht / Weight (B12) 11.775 kg / kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1665/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 2/8
Datum/Date 10.06.2024

Nr. (A07)	Order 6943	12.03.2024	Nr. (A07)	Order 6943	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118262

Lieferschein-Nr. / Dispatch note No.: 0091482292 vom 07.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN29**

Schmelzenanalyse / Ladle analysis (C70-C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,14	≤0,55	≤1,70	≤0,020	≤0,005	≤0,010	0,015-0,055	≤0,30	≤0,25	≤0,70
26954	0,08	0,19	1,62	0,014	0,001	0,005	0,039	0,23	0,05	0,35

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤0,08	≤0,025	≤0,050	≤0,0008	≤0,25	≤0,030	≤0,020	≤0,010	≤0,005	≤0,22
26954	0,04	0,003	0,035	0,0002	0,01	0,003	0,006	0,000	0,001	0,19

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤0,010	≤0,41	≤0,010	≤0,13		≤0,12
26954	0,000	0,41	0,000	0,08	0,64	0,08

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03) AJ

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1666/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
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Datum/Date 10.06.2024

Nr. (A07)	Order 6943	12.03.2024	Nr. (A07)	Order 6943	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Werksauftrags-Nr. / Works order No. (A08): 0000118262
Lieferschein-Nr. / Dispatch note No.: 0091482292 07.06.2024
Abnahme / Inspection (A05): NV **N142VN29**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
576519	26954	0,06	0,17	1,67	0,018	0,002	0,004	0,040	0,24
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
576519	26954	0,05	0,37	0,034	0,002	0,041	0,004	0,0001	0,17
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12				
576519	26954	0,40	0,66	0,08	0,08				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03): AJ

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1667/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 4/8
Datum/Date 10.06.2024

Nr. (A07)	Order 6943	12.03.2024	Nr. (A07)	Order 6943	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000118262

Lieferschein-Nr. / Dispatch note No.: 0091482292 / 07.06.2024

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme / Inspection (A05): NV **N142VN29**

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 - 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 - 675	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
576519	26954	K4G	Q	TM	P	521	621	0,84	21	
576519	26954	K4G	Q	TS	P	573	629	0,88	23	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
   TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1668/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 5/8
Datum/Date 10.06.2024

Nr. (A07)	Order 6943	12.03.2024	Nr. (A07) Order 6943
Besteller	Kröger Staal B.V.		Empfänger Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK		Customer 4780 AA MOERDIJK
(A06)	NIEDERLANDE		(A06) NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Werksauftrags-Nr. / Works order No. (A08): 0000118262
Lieferschein-Nr. / Dispatch note No.: 0091482292 07.06.2024
Abnahme / Inspection (A05): NV **N142VN29**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35	
576519	26954	K4	TM	65	57	71	64	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥416	2	3		
576519	26954	K4	TM	612	612	607		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1669/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
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Datum/Date 10.06.2024

Nr. (A07)	Order 6943	12.03.2024	Nr. (A07) Order 6943
Besteller	Kröger Staal B.V.		Empfänger Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK		Customer 4780 AA MOERDIJK
(A06)	NIEDERLANDE		(A06) NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Werksauftrags-Nr. / Works order No. (A08): 0000118262
Lieferschein-Nr. / Dispatch note No.: 0091482292 07.06.2024
Abnahme / Inspection (A05): NV **N142VN29**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
576519	26954	K4O	Q	A5	KV600	-040	184	227	220	210
576519	26954	K4O	Q	TM	KV600	-040	262	293	267	274
576519	26954	K4O	Q	TS	KV600	-040	269	228	232	243
576519	26954	K4H	Q	TM	KV600	-040	189	135	90	138
576519	26954	K4H	Q	TS	KV600	-040	185	207	204	199

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) H: 1/2 Dicke / 1/2 Thickness
O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1670/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 7/8
Datum/Date 10.06.2024

Nr. (A07) Order 6943 12.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6943
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Werksauftrags-Nr. 0000118262
Works order No.
(A08)
Lieferschein-Nr. 0091482292
Dispatch note No. 07.06.2024

Abnahme NV
Inspection **N142VN29**
(A05)

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
576519	26954	K4		TM	192			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV- classed objects is subject to special
consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1671/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1422898**
Seite/Page 8/8
Datum/Date 10.06.2024

Nr. (A07) Order 6943 12.03.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6943
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000118262
Works order No.
(A08)
Lieferschein-Nr. 0091482292
Dispatch note No. 07.06.2024

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Abnahme NV
Inspection **N142VN29**
(A05)

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1672/ 3402

73244

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 1/9
Datum/Date 13.02.2024

Nr. (A07)	Order 6904	Nr. (A07)	Order 6904
Besteller	Kröger Staal B.V.	Empfänger	Kröger Staal B.V.
Purchaser	4780 AA MOERDIJK	Customer	4780 AA MOERDIJK
(A06)	NIEDERLANDE	(A06)	NIEDERLANDE

21.09.2023

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
15	1	526438 1	56126	TM	40,00 x 3000,0 x 12000
15	1	527699 1	26955	TM	40,00 x 3000,0 x 12000
15	1	527701 1	26948	TM	40,00 x 3000,0 x 12000
15	1	527839 1*)	26955	TM	40,00 x 3000,0 x 11000
15	1	527840 1	26951	TM	40,00 x 3000,0 x 12000
15	1	527841 1	01950	TM	40,00 x 3000,0 x 12000
15	1	527842 1	01950	TM	40,00 x 3000,0 x 12000
15	1	530906 1	56126	TM	40,00 x 3000,0 x 12000
15	1	533797 1	26950	TM	40,00 x 3000,0 x 12000
Σ	9	Gewicht / Weight (B12): 100.794 kg / kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

*) Lieferung gemäß der Tolerierungsanfrage Nr.: 1070020002
*) Delivery in accordance with tolerance request no.: 1070020002

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition:
without objection

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1673/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 2/9
Datum/Date 13.02.2024

Nr. (A07) Order 6904 21.09.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6904
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Schmelzenanalyse / Ladle analysis (C70-C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤0,14	≤0,55	≤1,70	≤0,020	≤0,005	≤0,010	0,015-0,055	≤0,30	≤0,25	≤0,70
01950	0,08	0,20	1,61	0,014	0,001	0,004	0,042	0,24	0,03	0,36
26948	0,08	0,19	1,60	0,015	0,001	0,004	0,037	0,22	0,03	0,35
26950	0,08	0,18	1,54	0,010	0,002	0,004	0,032	0,22	0,04	0,34
26951	0,08	0,21	1,60	0,013	0,001	0,004	0,039	0,23	0,05	0,36
26955	0,09	0,18	1,59	0,013	0,003	0,005	0,043	0,22	0,05	0,35
56126	0,08	0,18	1,58	0,013	0,001	0,004	0,045	0,22	0,04	0,36

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤0,08	≤0,025	≤0,050	≤0,0008	≤0,25	≤0,030	≤0,020	≤0,010	≤0,005	≤0,22
01950	0,04	0,003	0,035	0,0002	0,004	0,003	0,007	0,000	0,001	0,19
26948	0,04	0,002	0,035	0,0002	0,01	0,003	0,001	0,000	0,002	0,19
26950	0,03	0,002	0,034	0,0001	0,003	0,003	0,003	0,000	0,001	0,19
26951	0,04	0,003	0,035	0,0002	0,003	0,003	0,006	0,000	0,002	0,19
26955	0,04	0,001	0,036	0,0001	0,01	0,003	0,007	0,000	0,002	0,20
56126	0,03	0,003	0,036	0,0002	0,003	0,003	0,002	0,000	0,001	0,19

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤0,010	≤0,41	≤0,010	≤0,13		≤0,12
01950	0,001	0,40	0,000	0,08	0,63	0,08
26948	0,001	0,40	0,001	0,08	0,61	0,08
26950	0,001	0,39	0,000	0,07	0,60	0,06
26951	0,001	0,40	0,000	0,08	0,64	0,08
26955	0,000	0,41	0,000	0,08	0,63	0,08
56126	0,001	0,40	0,000	0,07	0,62	0,07

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1674/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 3/9
Datum/Date 13.02.2024

Nr. (A07) Order 6904 21.09.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6904
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
527841	01950	0,07	0,18	1,63	0,012	0,001	0,005	0,037	0,26
527701	26948	0,07	0,17	1,57	0,011	0,000	0,003	0,037	0,21

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
527841	01950	0,03	0,37	0,028	0,004	0,032	0,01	0,0001	0,18
527701	26948	0,03	0,33	0,039	0,001	0,037	0,01	0,0004	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12
527841	01950	0,40	0,67	0,06	0,06
527701	26948	0,38	0,58	0,08	0,08

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1675/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
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Datum/Date 13.02.2024

Nr. (A07) Order 6904 21.09.2023
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6904
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000116279
Works order No.
(A08)
Abnahme NV
Inspection **N142N71A**
(A05)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % ≤1,70	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
533803 *)	26950	0,08	0,17	1,56	0,011	0,004	0,005	0,030	0,22
527840	26951	0,08	0,18	1,61	0,014	0,001	0,004	0,033	0,23
527699	26955	0,09	0,17	1,53	0,013	0,001	0,003	0,041	0,23
526438	56126	0,09	0,17	1,58	0,012	0,001	0,004	0,038	0,23

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,050	Mo % ≤0,25	B % ≤0,0008	EV1 1) % ≤0,22
533803 *)	26950	0,05	0,33	0,035	0,002	0,035	0,002	0,0000	0,19
527840	26951	0,06	0,35	0,033	0,004	0,028	0,01	0,0005	0,19
527699	26955	0,04	0,36	0,036	0,002	0,039	0,004	0,0001	0,20
526438	56126	0,03	0,36	0,034	0,002	0,042	0,003	0,0005	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,41	EV3 3) %	EV4 4) % ≤0,13	Nb+V % ≤0,12
533803 *)	26950	0,39	0,60	0,07	0,07
527840	26951	0,41	0,65	0,07	0,06
527699	26955	0,40	0,63	0,08	0,08
526438	56126	0,41	0,62	0,08	0,08

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1676/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
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Datum/Date 13.02.2024

Nr. (A07)	Order 6904	21.09.2023	Nr. (A07)	Order 6904	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa 460 - 580	Zugfestigkeit Tensile strength (C12) Rm MPa 520 - 700	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
526438	56126	K4G	Q	TM	P	517	576	0,84	26	
526438	56126	K4G	Q	TS	P	533	571	0,89	27	
527699	26955	K4G	Q	TM	P	510	569	0,84	29	
527699	26955	K4G	Q	TS	P	514	562	0,87	28	
527701	26948	K4G	Q	TM	P	525	573	0,88	28	
527701	26948	K4G	Q	TS	P	523	567	0,89	28	
527839	26955	K4G	Q	TM	P	485	548	0,88	28	
527839	26955	K4G	Q	TS	P	493	546	0,88	30	
527840	26951	K4G	Q	TM	P	530	582	0,86	23	
527840	26951	K4G	Q	TS	P	546	590	0,88	24	
527841	01950	K4G	Q	TM	P	528	584	0,86	23	
527841	01950	K4G	Q	TS	P	534	580	0,88	24	
527842	01950	K4G	Q	TM	P	509	571	0,87	28	
527842	01950	K4G	Q	TS	P	528	570	0,89	28	
530906	56126	K4G	Q	TM	P	533	584	0,87	26	
530906	56126	K4G	Q	TS	P	534	573	0,88	25	
533797	26950	K4G	Q	TM	P	534	579	0,88	24	
533797	26950	K4G	Q	TS	P	519	561	0,88	25	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

1677/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 6/9
Datum/Date 13.02.2024

Nr. (A07)	Order 6904	21.09.2023	Nr. (A07)	Order 6904	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35
526438	56126	K4	TM	65	71	68	68
527699	26955	K4	TM	65	66	61	64
527701	26948	K4	TM	76	68	71	72
527840	26951	K4	TM	58	73	62	64
527841	01950	K4	TM	72	74	72	73
533803 *)	26950	K4	TM	68	72	65	68

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥416	2	3
526438	56126	K4	TM	567	577	572
527699	26955	K4	TM	567	568	577
527701	26948	K4	TM	567	561	568
527840	26951	K4	TM	585	585	579
527841	01950	K4	TM	604	600	599
533803 *)	26950	K4	TM	565	566	564

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1678/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 7/9
Datum/Date 13.02.2024

Nr. (A07)	Order 6904	21.09.2023	Nr. (A07)	Order 6904	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
526438	56126	K4O	Q	A5	KV600	-040	252	240	249	247
526438	56126	K4O	Q	TM	KV600	-040	309	290	321	307
526438	56126	K4O	Q	TS	KV600	-040	281	239	240	253
527699	26955	K4O	Q	A5	KV600	-040	204	220	181	202
527699	26955	K4O	Q	TM	KV600	-040	192	166	244	201
527699	26955	K4O	Q	TS	KV600	-040	245	224	208	226
527701	26948	K4O	Q	A5	KV600	-040	128	109	88	108
527701	26948	K4O	Q	TM	KV600	-040	291	229	269	263
527701	26948	K4O	Q	TS	KV600	-040	291	260	268	273
527840	26951	K4O	Q	A5	KV600	-040	231	242	242	238
527840	26951	K4O	Q	TM	KV600	-040	328	299	264	297
527840	26951	K4O	Q	TS	KV600	-040	250	268	252	257
527841	01950	K4O	Q	A5	KV600	-040	249	282	284	272
527841	01950	K4O	Q	TM	KV600	-040	334	320	310	321
527841	01950	K4O	Q	TS	KV600	-040	269	261	233	254
527842	01950	K4O	Q	TM	KV600	-040	271	273	299	281
527842	01950	K4O	Q	TS	KV600	-040	285	328	248	287
530906	56126	K4O	Q	TM	KV600	-040	256	275	283	271
530906	56126	K4O	Q	TS	KV600	-040	236	239	312	262
533803 *)	26950	K4O	Q	A5	KV600	-040	64	74	68	69
533803 *)	26950	K4O	Q	TM	KV600	-040	83	87	76	82
533803 *)	26950	K4O	Q	TS	KV600	-040	93	87	90	90

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1679/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 8/9
Datum/Date 13.02.2024

Nr. (A07)	Order 6904	21.09.2023	Nr. (A07)	Order 6904	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

Weitere Prüfungen / Other tests (C50–C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30–C39) HV10			
526438	56126	K4		TM	180			
527699	26955	K4		TM	177			
527701	26948	K4		TM	177			
527840	26951	K4		TM	182			
527841	01950	K4		TM	183			
533803 *)	26950	K4		TM	182			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

1680/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1403487**
Seite/Page 9/9
Datum/Date 13.02.2024

Nr. (A07)	Order 6904	21.09.2023	Nr. (A07)	Order 6904	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000116279

Abnahme / Inspection (A05): NV **N142N71A**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/2019
MDS-Y40 Rev.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S460MLOILG

Application onboard DNV- classed objects is subject to special consideration.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend Option 18 der EN 10225:2009:
Verifiziert durch folgendes Dokument:
- SZMF-ED-PB-2022-0250

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- SZMF-ED-PB-2022-0250

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung(StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.
EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and do not exceed the clearing limit value of 100 Bq/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance(StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.
EPD acc. to EN 15804 + A2 & ISO 14025

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kühne

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

1681/ 3402

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
VOESTALPINE GROBBLECH GMB & CO / EUROPE STEEL PROJECTS B.V.	SEE NOTE	123B00	Q012401352

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

- PO 1724000100: HEAT 869177
  HEAT 958597
- PO 1724000102: HEAT 765564
- PO 1724001211: HEAT 26955

28748

INSPECTA S.R.L.

TEST REPORT
RAPPORTO DI PROVA

N° 361-00250-24 | Rev.00
Data: 19/09/2024

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N°1607 L

Object: *Oggetto:*	**MECHANICAL TEST ON BASE MATERIAL**		Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS** **SEE REMARKS**
		# Informazione fornita dal cliente/ Information provided by the customer	
Customer: *Committente:*	**ROSETTI MARINO S.p.A.**		
Address: *Indirizzo:*	**Via Trieste, 230 – 48122 Ravenna - ITALY**		
Final customer:. *Cliente finale:*	//		
Your delivery note n°: *Vs. DDT di consegna*	**n°** // *n°*	**Date:** *Data:* //	**MD52** 087/2024 *MD 52* **Date:** 19/08/2024 *Data:*
Start of activities:: *Inizio prove :*	**Date:** *Data:* 19/09/2024	**End of activities:** *Fine prove:*	**Date:** *Data:* 19/09/2024

PROVE RICHIESTE

☐ **TENSILE TEST**/*Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST**/*Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root /*Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST**/*Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST** / *Macrografia*		
☐ **HARDNESS TEST**/ *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST**/ *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS**/*Analisi Chimica*		
☐ **MICROEXAMINATION TEST** / *Micrografia*		
☐ **OTHER (Specify)**/*Altro/(Specificare)*		

Allegati /Attachments: NONE
NOTE/ Remarks: **REFERENCE CODE FROM CUSTOMER REQUEST: EN 10225-2: 2019**
Informazioni aggiuntive fornite dal cliente:
Additional information provided by the customer

Specimen ID	Thickness	Base material	Heat n°	Plate/Batch n°
327/24	45 mm	EN 10225-2 S460MLO	958597	249032/2
334/24	40 mm	EN 10225-2 S460MLO	28748	576495/1
336/24	40 mm	EN 10225-2 S460MLO	26955	527699/1
337/24	40 mm	EN 10225-2 S460MLO	765564	261778/1
341/24	45 mm	EN 10225-2 S460MLO	869177	245884/1

Laboratory Responsible	Customer Inspector	Third part Inspector
Responsabile Laboratorio	*Ispettore del cliente*	*Ispettore Terza parte*
Sig. Nicola Tini	B2MA	WITNESSED SURVEYOR D. TESEI DATE 19/09/2024
- INSPECTA - Laboratory Responsible 19-09-2024	19-09-2024 Witnessed	

I risultati contenuti nel presente rapporto di prova si riferiscono unicamente al campione sottoposto a prova. Il committente si impegna a riprodurre integralmente il rapporto di prova. E' vietata ogni forma di riproduzione parziale. L'accreditamento ACCREDIA non significa approvazione del prodotto da parte dell'ente di accreditamento e del laboratorio. I risultati di prova si riferiscono al campione così come ricevuto, essendo il campionamento eseguito dal cliente. Ove indicato l'incertezza di misura è da intendersi incertezza estesa, corrispondente ad un fattore di copertura Ku= 2 equivalente ad un livello di fiducia pari a 95%. Quando emesso il Report in revisione, l'oggetto revisionato è identificabile mediante barra verticale posta sul lato sinistro e dal testo in formato corsivo sottolineato.
Inspecta declina ogni responsabilità nel riportare sul rapporto di prova informazioni fornite dal cliente.
The results in this test report refers only to the specimen that has been tested. The customer undertakes to print out/reproduce the test report. Any partial reproduction is prohibited. Accredia's accreditation does not imply the product approval neither by the accreditation body or the laboratory. The test results refer to the sample as received, since the sampling is performed by the customer. Where indicated the measurement uncertainty is to be understood expanded uncertainty corresponding to a coverage factor Ku=2 equivalent to a level of confidence of 95 %. When the Report under review is issued, the revised object can be identified by the vertical bar on the left side and by the text in italics underlined.
Inspecta declines any responsibility in reporting information provided by the customer on the test report..

Headquarter: Via G.Giolitti 10 – 48123 Ravenna (RA) Italy – Phone /Fax + 39 0544 451424
Mobile +39 3515227934 - e-mail: inspectasrl@inspectasrl.com - www.inspectasrl.com - P.iva 03944480403
Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:19/09/2024
Data esecuzione prova:

performed in accordance with the standard / eseguita in conformità alla norma UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna :PP09 rev.09*

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / *coltello*	Requirement / Requisiti: Energy absorbed/ / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
327/24 BM	T	10x10x55	-60°C	V	2	360	372	382	371	/	/	/	/	/	/	/	SURFACE
327/24 BM	T	10x10x55	-60°C	V	2	420	412	403	412	/	/	/	/	/	/	/	1/2 THK
334/24 BM	T	10x10x55	-60°C	V	2	185	179	144	169	/	/	/	/	/	/	/	//
336/24 BM	T	10x10x55	-60°C	V	2	104	125	170	133	/	/	/	/	/	/	/	//
337/24 BM	T	10x10x55	-60°C	V	2	174	169	166	170	/	/	/	/	/	/	/	//
341/24 BM	T	10x10x55	-60°C	V	2	370	380	392	381	/	/	/	/	/	/	/	SURFACE
341/24 BM	T	10x10x55	-60°C	V	2	389	46	398	278	/	/	/	/	/	/	/	1/2 THK

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:*	//
Legend *Legenda*	L= Longitudinal / Longitudinale T= Transversal / Trasversale VWT 0/2 = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* VHT 0/2 = Impact Test on Fusion Line / *Resilienza Trasversale in linea di fusione* VHT 1/2 = Impact Test at 1mm from Fusion Line / *Resilienza trasversale a 1 mm dalla linea di fusione* VHT 2/2 = Impact Test at 2 mm from Fusion Line / *Resilienza trasversale a 2 mm dalla linea di fusione* VHT 5/2 = Impact Test at 5 mm from Fusion Line / *Resilienza trasversale a 5 mm dalla linea di fusione* WM = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura* HAZ = Impact Test on Heat Affected Zone / *Resilienza Trasversale in zona termicamente alterata* BM = Impact Test on Base Metal / *Resilienza Trasversale in materiale base* FL = Fusion Line/ *Linea di fusione* FL+1 = Fusion Line + 1mm/ *Linea di fusione+1mm* FL+2 = Fusion Line + 2mm/ *Linea di fusione+2mm* FL +5= Fusion Line + 5mm/ *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio*	Laboratory Responsible *Responsabile Laboratorio*	Customer Inspector *Ispettore del Cliente*	Third part Inspector *Ispettore Terza parte*
Dott. Ing. Mauro Bracheschi	Sig. Nicola Inti		
19/09/24	- INSPECTA srl - Laboratory Responsible 19_09_2024	BZMA 19-09-2024 Witnessed	RINA SERVICES S.p.A. ITALY WITNESSED SURVEYOR G. TESEI DATE 19/09/2024

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
VOESTALPINE GROBBLECH GMBH & CO / EUROPE STEEL PROJECTS B.V.	SEE NOTE	123B00	Q012401348

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

- **PO** 1724000100: HEAT 764349
- **PO** 1724000102: HEAT 765564
  HEAT 956703
- **PO** 1724001211: HEAT 26954
  HEAT 60302
  HEAT 902878

INSPECTA S.R.L.	TEST REPORT *RAPPORTO DI PROVA*		ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO LAB N°1607 L
	N° 130-00250-24 Data: 10/03/2025	Rev.00	

Object: *Oggetto:*	**IMPACT TEST ON BASE MATERIAL**					Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS**		**SEE REMARKS**	
		# Informazione fornita dal cliente/ Information provided by the customer				
Customer: *Committente:*	**ROSETTI MARINO S.p.A.**					
Address: *Indirizzo:*	**Via Trieste, 230 – 48122 Ravenna - ITALY**					
Final customer: *Cliente finale:*	//					
Your delivery note n°: *Vs. DDT di consegna*	**n°** // **n°**	**Date:** *Data:*	//	**MD52** *MD 52*	**148/2024**	**Date:** *Data:* **23/12/2024**
Start of activities: *Inizio prove:*	**Date:** *Data:* **10/03/2025**	**End of activities:** *Fine prove:*		**Date:** *Data:* **10/03/2025**		

PROVE RICHIESTE

☐ **TENSILE TEST**/*Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST**/*Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root /*Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST**/*Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST** / *Macrografia*		
☐ **HARDNESS TEST**/ *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST**/ *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS**/*Analisi Chimica*		
☐ **MICROEXAMINATION TEST** / *Micrografia*		
☐ **OTHER (Specify)**/ *Altro (Specificare)*		

Allegati /Attachments: NONE

NOTE/ Remarks: **NSC-CDA-N38-OSS-ENG-00059-08 SST-DES-DWG**

Informazioni aggiuntive fornite dal cliente:
Additional information provided by the customer

Specimen ID	Thickness	Base Material	Heat n°	Plate/Batch n°
554/24	20	EN 10225-2 S460MLO	764349	253549/1
555/24	25	EN 10225-2 S460MLO	902878	376851/1
556/24	35	EN 10225-2 S460MLO	765564	257215/1
557/24	40	EN 10225-2 S460MLO	956703	254568/2
558/24	50	EN 10225-2 S460MLO	60302	576511/1
559/24	50	EN 10225-2 S460MLO	26954	576519/1
~~560/24~~	~~80~~	~~EN 10225-2 S460MLO~~	~~514722~~	~~90671/02~~

560/24 Re-test due to heat/plate error (DILLINGER PLATE)

Laboratory Responsible *Responsabile Laboratorio* *Sig. Nicola Fini*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
- INSPECTA SST - Laboratory Responsible 10/03/2025	B2MA	BUREAU VERITAS ITALY WITNESSED SURVEYOR G. TESEI DATE 10/03/2025

I risultati contenuti nel presente rapporto di prova si riferiscono unicamente al campione sottoposto a prova. Il committente si impegna a riprodurre integralmente il rapporto di prova. E' vietata ogni forma di riproduzione parziale. L'accreditamento ACCREDIA non significa approvazione del prodotto da parte dell'ente di accreditamento e del laboratorio. I risultati di prova si riferiscono al campione così come ricevuto, essendo il campionamento eseguito dal cliente. Ove indicato l'incertezza di misura è da intendersi incertezza estesa, corrispondente ad un fattore di copertura Ku= 2 equivalente ad un livello di fiducia pari a 95%. Quando emesso il Report in revisione, l'oggetto revisionato è identificabile mediante barra verticale posta sul lato sinistro e dal testo in formato corsivo sottolineato.
Inspecta declina ogni responsabilità nel riportare sul rapporto di prova informazioni fornite dal cliente.
The results in this test report refers only to the specimen that has been tested. The customer undertakes to print out/reproduce the test report. Any partial reproduction is prohibited. Accredia's accreditation does not imply the product approval neither by the accreditation body or the laboratory. The test results refer to the sample as received, since the sampling is performed by the customer. Where indicated the measurement uncertainty is to be understood expanded uncertainty corresponding to a coverage factor Ku=2 equivalent to a level of confidence of 95 %. When the Report under review is issued, the revised object can be identified by the vertical bar on the left side and by the text in italics underlined. Inspecta declines any responsibility in reporting information provided by the customer on the test report..

Headquarter: Via G.Giolitti 10 – 48123 Ravenna (RA) Italy – Phone /Fax + 39 0544 451424
Mobile +39 3515227934 - e-mail: inspectasrl@inspectasrl.com - www.inspectasrl.com - P.iva 03944480403
Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:10/03/2025
Data esecuzione prova:

performed in accordance with the standard / *eseguita in conformità alla norma* UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna* :*PP09 rev.09*

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / *coltello*	Requirement / Requisiti: Energy absorbed / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
554/24 BM	T	10x10x55	-50°C	V	2	339	351	349	346	/	/	/	/	/	/	/	SURFACE
555/24 BM	T	10x10x55	-50°C	V	2	382	358	362	367	/	/	/	/	/	/	/	SURFACE
556/24 BM	T	10x10x55	-50°C	V	2	379	378	365	374	/	/	/	/	/	/	/	SURFACE
557/24 BM	T	10x10x55	-50°C	V	2	346	363	349	353	/	/	/	/	/	/	/	SURFACE
558/24 BM	T	10x10x55	-60°C	V	2	350	365	334	350	/	/	/	/	/	/	/	SURFACE
558/24 BM	T	10x10x55	-60°C	V	2	376	353	356	362	/	/	/	/	/	/	/	1/2 THK
559/24 BM	T	10x10x55	-60°C	V	2	339	390	355	361	/	/	/	/	/	/	/	SURFACE
559/24 BM	T	10x10x55	-60°C	V	2	343	377	327	349	/	/	/	/	/	/	/	1/2 THK
~~560/24 BM~~	~~T~~	~~10x10x55~~	~~-60°C~~	~~V~~	~~2~~	~~352~~	~~377~~	~~358~~	~~362~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~SURFACE~~
~~560/24 BM~~	~~T~~	~~10x10x55~~	~~-60°C~~	~~V~~	~~2~~	~~352~~	~~362~~	~~359~~	~~358~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~/~~	~~1/2 THK~~

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:* //

Legend *Legenda*

L= Longitudinal / Longitudinale
T= Trasversal / Trasversale
VWT 0/2 = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura*
VHT 0/2 = Impact Test on Fusion Line/ *Resilienza Trasversale in linea di fusione*
VHT 1/2 = Impact Test at 1mm from Fusion Line / *Resilienza trasversale a 1 mm dalla linea di fusione*
VHT 2/2 = Impact Test at 2 mm from Fusion Line / *Resilienza trasversale a 2 mm dalla linea di fusione*
VHT 5/2 = Impact Test at 5 mm from Fusion Line / *Resilienza trasversale a 5 mm dalla linea di fusione*
WM = Impact Test on Weld Metal/ *Resilienza trasversale in saldatura*
HAZ = Impact Test on Heat Affected Zone / *Resilienza Trasversale in zona termicamente alterata*
BM = Impact Test on Base Metal / *Resilienza Trasversale in materiale base*
FL = Fusion Line/ *Linea di fusione*
FL+1 = Fusion Line + 1mm/ *Linea di fusione+1mm*
FL+2 = Fusion Line + 2mm/ *Linea di fusione+2mm*
FL +5= Fusion Line + 5mm/ *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceeding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio*	Laboratory Responsible *Responsabile Laboratorio*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
Dott. Ing. Mauro Baccheschi	Sig. Nicola Fini		
INSPECTA Laboratory Technician 10/03/25	INSPECTA srl - Laboratory Responsible 10/03/25	B2MA 10/3/2025	RUSSIN REGISTRAS ITALY WITNESSED SURVEYOR G. TESEI DATE 10/03/2025

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order	Job	Barcode
EUROPE STEEL PROJECTS B.V	1724001211	123B00	Q012401346

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

24.04.2025

Matteo Ceccarelli

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

HEAT : 26951

INSPECTA S.R.L.	**TEST REPORT** ***RAPPORTO DI PROVA***		ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO **LAB N°1607 L**
	N° 128-00250-24 **Data: 07/03/2025**	**Rev.00**	

Object: *Oggetto:*	**MECHANICAL TEST ON BASE MATERIAL**				Pag. 1 di 2
Specimen: *Saggio:*	**SEE REMARKS**	**#Base Material:** *Materiale Base:*	**SEE REMARKS**	**SEE REMARKS**	
		# Informazione fornita dal cliente/ Information provided by the customer			
Customer: *Committente:* **Address:** *Indirizzo:*	**ROSETTI MARINO S.p.A.** **Via Trieste, 230 – 48122 Ravenna - ITALY**				
Final customer:. *Cliente finale:*	//				
Your delivery note n°: *Vs. DDT di consegna*	**n°** // *n°*	**Date:** *Data:* //	**MD52** *MD 52*	**087/2024**	**Date:** *Data:* **19/08/2024**
Start of activities:: *Inizio prove :*	**Date:** *Data:* **07/03/2025**	**End of activities:** *Fine prove:*			**Date:** *Data:* **07/03/2025**

PROVE RICHIESTE

☐ **TENSILE TEST**/*Trazione*	☐ Trasversal/*Trasversale*	☐ Longitudinal/*Longitudinale*
☐ **BEND TEST**/*Piega*	☐ Trasversal/*Trasversale* ☐ Longitudinal/*Longitudinale*	☐ Face/Root /*Dritto/Rovescio* ☐ Side/ *Laterale*
☒ **IMPACT TEST**/*Resilienza*	☒ Trasversal/ *Trasversale*	☐ Longitudinal/ *Longitudinale*
☐ **MACROEXAMINATION TEST** / *Macrografia*		
☐ **HARDNESS TEST**/ *Durezza*	☐ HV 5	☐ HV 10
☐ **FRACTURE TEST**/ *Frattura*	☐ Plate with/on Plate/ *Piastra con/su Piastra* ☐ Pipe with/on Pipe/*Tubo con/ su Tubo*	☐ Pipe on Plate/*Tubo su Piastra*
☐ **CHEMICAL ANALYSIS**/*Analisi Chimica*		
☐ **MICROEXAMINATION TEST** / *Micrografia*		
☐ **OTHER (Specify)**/*Altro/(Specificare)*		

Allegati /Attachments: NONE

NOTE/ Remarks: **REFERENCE CODE FROM CUSTOMER REQUEST: EN 10225-2: 2019**

Informazioni aggiuntive fornite dal cliente:
Additional information provided by the customer

Specimen ID	Thickness	Base material	Heat n°	Plate/Batch n°
335/24	40 mm	EN 10225-2 S460MLO	26951	576228/1

Laboratory Responsible *Responsabile Laboratorio* *Sig. Nicola Fini*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
- INSPECTA S.r.l. - Laboratory Responsible 07/03/2025	B2MA 10/03/2025	07/03/2025

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Capital Stock € 60.000,00 - Chamber of Commerce registration Ravenna No. 03944480403 - R.E.A. No. RA-207045

IMPACT TEST
Prova di resilienza

Date of Testing:07/03/2025
Data esecuzione prova:

performed in accordance with the standard / *eseguita in conformità alla norma* UNI EN ISO 148-1:2016

The test was performed using the Galdabini Charpy pendulum machine, model Impact 450, s.n. VAUP/02
La prova è stata eseguita utilizzando macchina pendolo Charpy marca Galdabini, modello Impact 450, s.n. VAUP/02

Internal procedure *Procedura interna* :**PP09 rev.09**

Specimen id. *Identificazione provino*	Direction *Direzione*	Dimension *Dimensioni (mm)*	Test Temp. *Temp .test*	Notch Type *Intaglio*	Knife / *coltello*	Requirement / Requisiti: Energy absorbed / Energia assorbita – Individual *Individuale Joule* 1	2	3	Average *Media Joule*	U	Lateral Expansion *Espansione laterale (mm)* 1	2	3	Shear Area *Area fragile %* 1	2	3	Remarks *Note*
335/24 BM	T	10x10x55	-50°C	V	2	330	342	339	337	/	/	/	/	/	/	/	//

END OF TEST REPORT
FINE DEL RAPPORTO DI PROVA

Remarks *Note:*	//
Legend *Legenda*	**L= Longitudinal / Longitudinale** **T= Trasversal / Trasversale** **VWT 0/2 = Impact Test on Weld Metal/** *Resilienza trasversale in saldatura* **VHT 0/2 = Impact Test on Fusion Line /** *Resilienza Trasversale in linea di fusione* **VHT 1/2 = Impact Test at 1mm from Fusion Line /** *Resilienza trasversale a 1 mm dalla linea di fusione* **VHT 2/2 = Impact Test at 2 mm from Fusion Line /** *Resilienza trasversale a 2 mm dalla linea di fusione* **VHT 5/2 = Impact Test at 5 mm from Fusion Line /** *Resilienza trasversale a 5 mm dalla linea di fusione* **WM = Impact Test on Weld Metal/** *Resilienza trasversale in saldatura* **HAZ = Impact Test on Heat Affected Zone /** *Resilienza Trasversale in zona termicamente alterata* **BM = Impact Test on Base Metal /** *Resilienza Trasversale in materiale base* **FL = Fusion Line/** *Linea di fusione* **FL+1 = Fusion Line + 1mm/** *Linea di fusione+1mm* **FL+2 = Fusion Line + 2mm/** *Linea di fusione+2mm* **FL +5= Fusion Line + 5mm/** *Linea di fusione +5mm*

NB I valori al di sopra di 360 Joule sono superiori all'80% del fondo scala della macchina.
Values above 360 Joule are exceeding 80% of the machine capacity

Laboratory Technician *Tecnico di Laboratorio*	Laboratory Responsible *Responsabile Laboratorio*	Customer Inspector *Ispettore del cliente*	Third part Inspector *Ispettore Terza parte*
Dott. Ing. Mauro Baccheschi Laboratory Technician 07/03/2025	Sig. Nicola Fini INSPECTA srl - Laboratory Responsible 07/03/2025	B2MA 10/03/2025	BUREAU VERITAS WITNESSED SURVEYOR G. TESEI DATE 07/03/2025

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1724001251	122A70C	Q012400517

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 05/07/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE SpA

LAMIERE DA TRENO - RICAVATE DA COILS
COILS NERI E DECAPATI IN TUTTE LE QUALITÀ
SPIANATURA COILS DA 1,5 A 40 MM.
Member of GIAQ Federation
CERTIFIED MANAGEMENT SYSTEM ISO 9001

CARICATORE (art.2, comma 1, lettera d)

Capitale Sociale inter. vers. € 1.000.000,00 - Codice Fiscale e Partita IVA 02318260987
25010 San Zeno Naviglio (Brescia) - Via IV Novembre, 32 - Tel. 030.3539261 (8 linee r.a.)
Telefax 030.3539352 - R.E.A. Brescia N. 439327 - N. Mecc. BS 439327 - Reg. Imp. N.18882 Trib. di BS

DOC. N. 4143 **DEL** 04/07/2024

INIZIO TRASPORTO O CONS.
ORA: 15.51
DATA: 04/07/2024
PESO LORDO:
TARA:
NETTO:

CAUSALE DEL TRASPORTO: VENDITA

ASPETTO ESTERIORE DEI BENI: LAMIERE

N. COLLI: 10

TRASPORTO A CURA DEL
PORTO VETTORE .
FRANCO DESTINO

VS. ORDINE N.: 1724001251

PROPRIETARIO MERCE (art. 2, comma 1, lettera e)
ROSETTI MARINO S.P.A. ROSE10 ROSE10
Tel 0544/878111
VIA TRIESTE 230
48100 RAVENNA RA P.I 00082100397

LUOGO DI SCARICO
00000

TARGA AUTOMEZZO: **FF377XL

VETTORE: (art.2, comma 1, lettera b)
NICOLI SRL
VIA PRADELLA, 23
ALBINO - BG
P.I 01223850163 Iscrizione albo BG/1155473/S

TASSATIVO TRASPORTO COPERTO

L'ATTREZZATURA DI BASE È DI PROPRIETÀ DEL TRASPORTATORE

BANCA D'APPOGGIO PAGAMENTO
CASSA DI RISPARMIO DI IMOLA FIL.RAVENNA PAG.

CODICE PAGAMENTO: 15 R.D. 60 GG DF FM

AGENTE: 91 DIR.UFF.SOSSI

CODICE	DESCRIZIONE BENI (Natura - Qualità)	PESO	PREZZO	SC. %
	** Ns. Ordine n. 243688 del 20/06/2024			
	** Vs. Ordine n. 1724001251			
T2T510D00000000	LAM.TRENO S355J2+N -8/080 T.	23,44		
	5 10,00 2480X 12000 Tot.Fogli 10	EG,HH		
	261093-261090-261091-261092-261009-			
	5 10,00 2480X 12000			
	260997-261010-261012-261089-261094-			
	RF.CO.122A70C-BOURI-BGUP-GRM MODULE			

Il materiale di cui al presente documento si intende accettato, sotto ogni forma, se trascorsi 5 giorni dalla consegna non verrà notificato a mezzo raccomandata alcun eventuale reclamo, con valido motivo. - Eventuali difformità o vizi, non occulti, del materiale consegnato dovranno essere contestati, a pena di inammissibilità, prima di qualsiasi lavorazione o trattamento e comunque nei termini di legge: non verranno accettati resi del materiale lavorato o trattato eccetto che nell'ipotesi di vizi occulti verificabili solo con la lavorazione. La merce viaggia a rischio e pericolo del Compratore anche se venduta franco destino. - I pesi parziali sono approssimativi. - Il peso totale è il solo riconosciuto.

TOTALE KG. 23,440

Peso rilevato senza interventi manuali con apparecchiature elettroniche

DOCUMENTO E SCHEDA DI TRASPORTO
(D.P.R. 14.08.1996 n. 472)
(art. 7-bis, D.Lgs. 286/2005)

IL TRASPORTO AVVERRÀ NEL RISPETTO DEL VIGENTE CODICE DELLA STRADA - ART. 61-62-142-164-167-174.

Dichiaro di aver ricevuto il materiale sopra indicato e che il numero dei pezzi ed il peso totale accettato è conforme al dichiarato e non si riscontrano segni di manomissione
FIRMA DEL DESTINATARIO

LEGGE 30-4-1976 N. 312 - La portata dell'automezzo da voi dichiaratoci consente di caricare il quantitativo di cui al presente Borderau.
Dichiaro di aver ricevuto in consegna per il trasporto il materiale sopra indicato, che ho fatto caricare e che ho personalmente assicurato e coperto a regola d'arte sull'automezzo.
FIRMA DELL'INCARICATO DEL TRASPORTO FIRMA CONDUCENTE

GENERALITA' COMPILATORE
Massimiliano Pastore

COMMITTENTE TRASPORTO: CARICATORE COPIA PER IL CLIENTE

1	260994	3	260996	5	261001	7	261003
2	260998	4	261000	6	261002	8	261004

9	261005	11	261007	13	261009	15	261011
10	261006	12	261008	14	261010	16	261012

17	261013	19	261015	21	261017	23	261019
18	261014	20	261016	22	261018	24	261020

25	261021	27	261023	29	261025		
26	261022	28	261024	30	261026		

CERTIFICATO DI CONTROLLO 3.1 / INSPECTION CERTIFICATE 3.1 - EN 10204:2004

A04/A05

METINVEST

METINVEST TRAMETAL SPA

A01

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N* = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A03 N° Certificato / Certificate no.: 616363

Z02 Data / Date: 25/06/2024

A08 N° Ordine Trametal / Works order: 32402797

A07 N° Ordine cliente / Customer's order: mail

DDT: BOL 32412099

del / date: 24/06/2024

Pratica / File no.:

del / date:

A06 Cliente / Customer

FRANCHINI LAMIERE S.P.A.

Via 4 novembre 32
25010 SAN ZENO NAVIGLIO 25010 IT
BS ITALIA

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355J2+N
Normativa / Specification	EN10025-2:2019

B06 Marcatura di prodotto / Marking of the product

LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI [mm] DIMENSIONS	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE HEAT TREATMENT (C)	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	PERMANENZA Min HOLDING TIME	VELOCITA' RAFFREDDAMENTO °C/h COOLING RATE	TEMPERATURA FINE °C END TEMPERATURE	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	TEMPERATURA (Q) HOLDING TIME	PERMANENZA (Q) Min COOLING	RAFFREDDAMENTO	TEMPERATURA (T) °C TEMPERATURE	PERMANENZA (T) Min HOLDING TIME	RAFFREDDAMENTO COOLING
3	FTAA370105A	1960158	10.00X2450X12000	2,31	798392	BO	N*	ZG256		1															
3	FTAA370105B	1960158	10.00X2450X12000	2,31	798392	BO	N*	ZG256		2															
3	VTAA020902A	1960467	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		3															
3	VTAA020902B	1960467	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		4															
3	VTAA020905A	1960470	10.00X2450X12000	2,31	798410	BO	N*	[ZG262]		5															
3	VTAA020905B	1960470	10.00X2450X12000	2,31	798410	BO	N*	[ZG262]		6															
3	VTAA021003A	1960240	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		7															
3	VTAA021003B	1960240	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		8															
3	VTAA021004A	1960437	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		9															
3	VTAA021004B	1960437	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		10															
3	VTAA021005A	1960245	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		11															
3	VTAA021005B	1960245	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		12															
3	VTAA030605A	1960168	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		13															
3	VTAA030605B	1960168	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		14															
3	VTAA031201A	1960161	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		15															
3	VTAA031201B	1960161	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		16															
3	VTAA031202A	1960155	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		17															
3	VTAA031202B	1960155	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		18															
3	VTAA031203A	1960446	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		19															
3	VTAA031203B	1960446	10.00X2450X12000	2,31	798407	BO	N*	[ZG259]		20															
3	VTAA031204A	1960448	10.00X2450X12000	2,31	798409	BO	N*	ZG261		21															
3	VTAA031204B	1960448	10.00X2450X12000	2,31	798409	BO	N*	ZG261		22															
3	VTAA031205A	1960451	10.00X2450X12000	2,31	798409	BO	N*	[ZG261]		23															
3	ZTAE350202A	1960216	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		24															

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI [mm] DIMENSIONS	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	PERMANENZA Min HOLDING TIME	VELOCITA' RAFFREDDAMENTO °C/h COOLING RATE	TEMPERATURA FINE °C END TEMPERATURE	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURE (Q) °C	PERMANENZA (Q) Min HOLDING TIME	COOLING	TEMPERATURA (T) °C TEMPERATURE	PERMANENZA (T) Min HOLDING TIME	COOLING
3	ZTAE350202B	1960216	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		25															
3	ZTAE350203A	1960219	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		26															
3	ZTAE350203B	1960219	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		27															
3	ZTAE350403A	1960095	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		28															
3	ZTAE350403B	1960095	10.00X2450X12000	2,31	797526	BO	N*	[ZF800]		29															
3	ZTAE820702B	1960200	10.00X2450X12000	2,31	798364	BO	N*	ZG251		30															

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C	Mn	Si	P	S	Cu	Ni	Cr	Mo	Al	V	Nb	Ti	Sn	Ca	N	B	H	Ceq1	Ceq2	Pcm
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	% (D)	% (D)	% (D)
S355J2+N Min 0.00 - 30.00																					
S355J2+N Max 0.00 - 30.00	0,20	1,60	0,55	0,025	0,025	0,550														0,45	
FTAA37	0,15	1,36	0,21	0,014	0,006	0,030	0,020	0,040	<0.005	0,027	0,003	0,004	0,009	<0.005	0,0000	0,0037	0,0003	0,0000	0,38	0,39	0,23
VTAA02	0,15	1,37	0,20	0,013	0,002	0,070	0,040	0,030	<0.005	0,036	0,001	0,001	0,002	<0.005	0,0000	0,0044	0,0001	0,0000	0,38	0,39	0,23
VTAA03	0,15	1,37	0,18	0,016	0,008	0,090	0,050	0,040	<0.005	0,047	<0.005	<0.010	0,002	<0.005	0,0000	0,0044	0,0001	0,0000	0,38	0,40	0,23
ZTAE35	0,17	1,38	0,18	0,016	0,014	0,010	0,010	0,030	<0.005	0,020	0,003	<0.010	0,002	<0.005	0,0000	0,0120	<0.0005	0,0000	0,40	0,41	0,25
ZTAE82	0,15	1,40	0,20	0,013	0,017	0,010	0,010	0,030	<0.005	0,050	0,002	<0.010	0,002	<0.005	0,0000	0,0120	<0.0005	0,0000	0,38	0,39	0,23

			PROVA DI TRAZIONE TENSILE TEST									PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE LOCATION (1)	POSIZIONE LOCATION (2)	DIREZIONE ORIENTATION (3)	TEMPERATURA TEST TEMPERATURE [°C]	ReH YIELD STRENGTH [Mpa]	Rm TENSILE STRENGTH [Mpa]	Reh/Rm	A% ELONGATION	Rp 0,2 PROOF/YIELD STRENGTH [Mpa]	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA WIDTH [mm]	DIREZIONE ORIENTATION (3)	TEMPERATURA TEST TEMPERATURE [°C]	POSIZIONE LOCATION (2)	SINGOLI VALORI INDIVIDUAL VALUES [J]	MEDIA MEAN VALUE [J]	DIREZIONE ORIENTATION (3)	MANDRINO MANDREL	ANGOLO ANGLE [°]	ESITO (5) RESULT	POSIZIONE LOCATION (2)	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% VALORE MEDIO Z% MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES
S355J2+N Min 0.00 - 16.00					20	355	470		20,0																		
S355J2+N Max 0.00 - 16.00					20		630																				
S355J2+N Min 6.00 - 999.00													L	-20			27										
ZF800	9,00	2	P	T	20	409	540	0,76	32,7		P	7,50	L	-20	P	75 96 82	84										
ZG125	8,00	2	P	T	20	389	510	0,76	39,5		P	7,50	L	-20	P	117 84 103	101										
ZG251	10,00	2	P	T	20	394	541	0,73	30,8		P	7,50	L	-20	P	124 111 166	134										
ZG256	10,00	2	P	T	20	388	517	0,75	33,1		P	7,50	L	-20	P	140 72 122	111										
ZG259	10,00	2	P	T	20	388	511	0,76	33,7		P	7,50	L	-20	P	89 128 72	96										
ZG261	10,00	2	P	T	20	392	510	0,77	33,9		P	7,50	L	-20	P	99 133 80	104										
ZG262	10,00	2	P	T	20	386	510	0,76	32,6		P	7,50	L	-20	P	120 133 117	123										

C10
UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
3		EN 10029 CL.A	-0+100 MM	-0+200 MM	EN 10163/2 CL A1	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06		
Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE	METINVEST TRAMETAL S.p.a/ F. Andrian CQ Manager

METINVEST
METINVEST TRAMETAL SPA

Metinvest Trametal spa
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Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2NZ15	EN10025-2:2019
S355JR+AR	EN10025-2:2019
S355JR+N	EN10025-2:2019
S355J0+AR	EN10025-2:2019
S355J0+N	EN10025-2:2019
S355J2+N	EN10025-2:2019
S355K2+N	EN10025-2:2019
S355J2NZ25	EN10025-2:2019
S355J2NZ35	EN10025-2:2019
S355K2NZ15	EN10025-2:2019
S355K2NZ25	EN10025-2:2019
S355K2NZ35	EN10025-2:2019
S355J0C+N	EN10025-2:2019
S355J2C+N	EN10025-2:2019
S355K2C+N	EN10025-2:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355J2+N	FTAA370105A	1960158	EN10025-1:2004
Lamiera/ Plate	S355J2+N	FTAA370105B	1960158	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA020902A	1960467	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA020902B	1960467	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA020905A	1960470	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA020905B	1960470	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021003A	1960240	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021003B	1960240	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021004A	1960437	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021004B	1960437	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021005A	1960245	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021005B	1960245	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA030605A	1960168	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA030605B	1960168	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031201A	1960161	EN10025-1:2004

Lamiera/ Plate	S355J2+N	VTAA031201B	1960161	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031202A	1960155	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031202B	1960155	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031203A	1960446	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031203B	1960446	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031204A	1960448	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031204B	1960448	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA031205A	1960451	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350202A	1960216	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350202B	1960216	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350203A	1960219	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350203B	1960219	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350403A	1960095	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350403B	1960095	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE820702B	1960200	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

The products specified in this document are intended to be used in welded structures, bolted and riveted.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	Prestazione / Performance	Norma Armonizzata / Harmonized specification
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

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1	261043	3	261045	5	261041	7	261049
2	261044	4	261046	6	261048	8	261050
9	261051	11	261053	13	261055	15	261057
10	261052	12	261054	14	261056	16	261058
17	261059	19	261061	21	261063	23	261065
18	261060	20	261062	22	261064	24	261066
25	261067	27	261069				
26	261068	28	261070	29	261071	31	261073
				30	261072	32	261074
33	261075	35	261077	37	261079	39	261081
34	261076	36	261078	38	261080	40	261082
41	261083	43	261085	45	261087	47	261089
42	261084	44	261086	46	261088	48	261090
49	261091	51	261093				
50	261092	52	261094				

A02

CERTIFICATO DI CONTROLLO 3.1 / INSPECTION CERTIFICATE 3.1 - EN 10204:2004

A04/A05

METINVEST

METINVEST TRAMETAL SPA

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N* = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A01

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A06 Cliente / Customer

FRANCHINI LAMIERE S.P.A.

Via 4 novembre 32
25010 SAN ZENO NAVIGLIO 25010 IT
BS ITALIA

A03 N° Certificato / Certificate no.	A02 Data / Date
616451	26/06/2024
A08 N° Ordine Trametal / Works order	**A07 N° Ordine cliente / Customer's order**
32402797	mail
DDT	del / date
BOL 32412198	25/06/2024
Pratica / File no.	
del / date	

B06 Marcatura di prodotto / Marking of the product

LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355J2+N
Normativa / Specification	EN10025-2:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	PERMANENZA Min HOLDING TIME	VELOCITA' RAFFREDDAMENTO °C/h COOLING RATE	TEMPERATURA FINE °C END TEMPERATURE	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	PERMANENZA (Q) Min HOLDING TIME	RAFFREDDAMENTO COOLING	TEMPERATURA (T) °C TEMPERATURE	PERMANENZA (T) Min HOLDING TIME	RAFFREDDAMENTO COOLING
1	VTAA060202E	1959600	8.00X2450X6000	0,92	797969	BO	N*	[ZG033]		6															
1	VTAA060202F	1959600	8.00X2450X6000	0,92	797969	BO	N*	[ZG033]		7															
1	ZTAE350401A	1960184	8.00X2450X6000	0,92	797526	BO	N*	[ZF800]		8															
1	ZTAE350401B	1960184	8.00X2450X6000	0,92	797526	BO	N*	[ZF800]		9															
1	ZTAE350401C	1960184	8.00X2450X6000	0,92	797526	BO	N*	[ZF800]		10															
1	ZTAE790103B	1960179	8.00X2450X6000	0,92	798361	BO	N*	[ZG250]		11															
1	ZTAE790103C	1960179	8.00X2450X6000	0,92	798361	BO	N*	[ZG250]		12															
1	ZTAE860303A	1960193	8.00X2450X6000	0,92	798359	BO	N*	[ZG248]		1															
1	ZTAE860303B	1960193	8.00X2450X6000	0,92	798359	BO	N*	[ZG248]		2															
1	ZTAE860303C	1960193	8.00X2450X6000	0,92	798359	BO	N*	[ZG248]		3															
1	ZTAE860303D	1960193	8.00X2450X6000	0,92	798359	BO	N*	[ZG248]		4															
1	ZTAE860303E	1960193	8.00X2450X6000	0,92	798359	BO	N*	[ZG248]		5															
2	VTAA021001A	1960230	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		13															
2	VTAA021001B	1960230	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		14															
2	VTAA021001C	1960230	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		15															
2	VTAA021001D	1960230	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		16															
2	VTAA021002A	1960237	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		17															
2	VTAA021002B	1960237	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		18															
2	VTAA021002C	1960237	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		19															
2	VTAA021002D	1960237	10.00X2450X6000	1,15	798213	BO	N*	[ZG125]		20															
2	VTAA030601A	1959594	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		21															
2	VTAA030601B	1959594	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		22															
2	VTAA030601C	1959594	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		23															
2	VTAA030705A	1959583	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		24															

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT BEGINNING TEMPERATURA INIZIO °C	TEMPERATURE HEATING RATE VELOCITA' RISCALDO C/h	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	TEMPERATURA FINE °C END TEMPERATURE	N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	PERMANENZA (Q) Min HOLDING TIME	RAFFREDDAMENTO COOLING	TEMPERATURA (T) °C TEMPERATURE	PERMANENZA (T) Min HOLDING TIME	RAFFREDDAMENTO COOLING
2	VTAA030705B	1959583	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		25															
2	VTAA030705C	1959583	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		26															
2	VTAA030705D	1959583	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		27															
2	VTAA030705E	1959583	10.00X2450X6000	1,15	798407	BO	N*	[ZG259]		28															
2	VTAA030805A	1960227	10.00X2450X6000	1,15	798406	BO	N*	[ZG258]		29															
2	VTAA030805B	1960227	10.00X2450X6000	1,15	798406	BO	N*	[ZG258]		30															
2	VTAA030805C	1960227	10.00X2450X6000	1,15	798406	BO	N*	[ZG258]		31															
2	VTAA030805D	1960227	10.00X2450X6000	1,15	798406	BO	N*	[ZG258]		32															
2	VTAA060205C	1959677	10.00X2450X6000	1,15	797969	BO	N*	[ZG033]		33															
2	VTAA060205D	1959677	10.00X2450X6000	1,15	797969	BO	N*	[ZG033]		34															
2	ZTAE790303A	1960203	10.00X2450X6000	1,15	798361	BO	N*	[ZG250]		35															
2	ZTAE790303B	1960203	10.00X2450X6000	1,15	798361	BO	N*	[ZG250]		36															
2	ZTAE790303C	1960203	10.00X2450X6000	1,15	798361	BO	N*	[ZG250]		37															
2	ZTAE790303D	1960203	10.00X2450X6000	1,15	798361	BO	N*	[ZG250]		38															
2	ZTAE860301A	1960196	10.00X2450X6000	1,15	798359	BO	N*	ZG248		39															
2	ZTAE860301B	1960196	10.00X2450X6000	1,15	798359	BO	N*	ZG248		40															
2	ZTAE860301C	1960196	10.00X2450X6000	1,15	798359	BO	N*	ZG248		41															
2	ZTAE860301D	1960196	10.00X2450X6000	1,15	798359	BO	N*	ZG248		42															
2	ZTAE860302A	1960189	10.00X2450X6000	1,15	798359	BO	N*	[ZG248]		43															
2	ZTAE860302B	1960189	10.00X2450X6000	1,15	798359	BO	N*	[ZG248]		44															
2	ZTAE860302C	1960189	10.00X2450X6000	1,15	798359	BO	N*	[ZG248]		45															
2	ZTAE860302D	1960189	10.00X2450X6000	1,15	798359	BO	N*	[ZG248]		46															
3	VTAA020901A	1960466	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		47															
3	VTAA020901B	1960466	10.00X2450X12000	2,31	798213	BO	N*	[ZG125]		48															
3	VTAA020903A	1960455	10.00X2450X12000	2,31	798410	BO	N*	ZG262		49															
3	VTAA020903B	1960455	10.00X2450X12000	2,31	798410	BO	N*	ZG262		50															
3	VTAA020904B	1960454	10.00X2450X12000	2,31	798410	BO	N*	[ZG262]		51															
3	VTAA031205B	1960451	10.00X2450X12000	2,31	798409	BO	N*	[ZG261]		52															

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07 COLATA HEAT	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Cu %	C77 Ni %	C78 Cr %	C79 Mo %	C80 Al %	C81 V %	C82 Nb %	C83 Ti %	C84 Sn %	C85 Ca %	C86 N %	C87 B %	C88 H %	C89 Ceq1 % (D)	C90 Ceq2 % (D)	C91 Pcm % (D)
S355J2+N Min 0.00 - 30.00																					
S355J2+N Max 0.00 - 30.00	0,20	1,60	0,55	0,025	0,025	0,550														0,45	
VTAA02	0,15	1,37	0,20	0,013	0,002	0,070	0,040	0,030	<0.005	0,036	0,001	0,001	0,002	<0.005	0,0000	0,0044	0,0001	0,0000	0,38	0,39	0,23
VTAA03	0,15	1,37	0,18	0,016	0,008	0,090	0,050	0,040	<0.005	0,047	<0.005	<0.010	0,002	<0.005	0,0000	0,0044	0,0001	0,0000	0,38	0,40	0,23
VTAA06	0,15	1,43	0,20	0,015	0,001	0,100	0,060	0,030	<0.005	0,037	0,001	0,001	0,002	<0.005	0,0000	0,0045	0,0002	0,0000	0,39	0,41	0,24
ZTAE35	0,17	1,38	0,18	0,016	0,014	0,010	0,010	0,030	<0.005	0,020	0,003	<0.010	0,002	<0.005	0,0000	0,0120	<0.0005	0,0000	0,40	0,41	0,25
ZTAE79	0,16	1,57	0,20	0,012	0,017	0,010	0,010	0,030	<0.005	0,041	0,003	<0.010	0,002	<0.005	0,0000	0,0120	<0.0005	0,0000	0,42	0,43	0,25
ZTAE86	0,15	1,60	0,23	0,014	0,016	0,010	0,010	0,030	<0.005	0,043	0,002	<0.010	0,002	<0.005	0,0000	0,0120	<0.0005	0,0000	0,42	0,42	0,24

			PROVA DI TRAZIONE TENSILE TEST										PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00,		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	ReH [Mpa] YIELD STRENGTH	Rm [Mpa] TENSILE STRENGTH	ReH/Rm	A% ELONGATION	Rp 0,2 [Mpa] PROOF/YIELD STRENGTH	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA [mm] WIDTH	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDRINO MANDREL	ANGOLO [°] ANGLE	ESITO (5) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
S355J2+N Min 0.00 - 16.00					20	355	470		20,0																			
S355J2+N Max 0.00 - 16.00					20		630																					
S355J2+N Min 6.00 - 999.00													L	-20			27											
ZF800	9,00	2	P	T	20	409	540	0,76	32,7		P	7,50	L	-20	P	75 96 82	84											
ZG033	10,00	2	P	T	20	386	511	0,76	33,1		P	7,50	L	-20	P	121 131 103	118											
ZG125	8,00	2	P	T	20	389	510	0,76	39,5		P	7,50	L	-20	P	117 84 103	101											
ZG248	10,00	2	P	T	20	393	550	0,71	29,4		P	7,50	L	-20	P	88 77 129	98											
ZG250	8,00	2	P	T	20	393	549	0,72	29,9		P	7,50	L	-20	P	105 130 118	118											
ZG258	10,00	2	P	T	20	389	511	0,76	33,2		P	7,50	L	-20	P	101 129 139	123											
ZG259	10,00	2	P	T	20	388	511	0,76	33,7		P	7,50	L	-20	P	89 128 72	96											
ZG261	10,00	2	P	T	20	392	510	0,77	33,9		P	7,50	L	-20	P	99 133 80	104											
ZG262	10,00	2	P	T	20	386	510	0,76	32,6		P	7,50	L	-20	P	120 133 117	123											

C10

UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
1		EN 10029 CL.A	-0+100 MM	-0+200 MM	EN 10163/2 CL A1	EN 10029 CL. N
2		EN 10029 CL.A	-0+100 MM	-0+200 MM	EN 10163/2 CL A1	EN 10029 CL. N
3		EN 10029 CL.A	-0+100 MM	-0+200 MM	EN 10163/2 CL A1	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE	METINVEST TRAMETAL S.p.A. F. Andrian CQ Manager

METINVEST
METINVEST TRAMETAL SPA

Metinvest Trametal spa
Head Office:
Via XII Ottobre 1, 5° piano
16121 Genova - Italy
Tel. +39 010 5762911
Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-2

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-2

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355J2NZ15	EN10025-2:2019
S355JR+AR	EN10025-2:2019
S355JR+N	EN10025-2:2019
S355J0+AR	EN10025-2:2019
S355J0+N	EN10025-2:2019
S355J2+N	EN10025-2:2019
S355K2+N	EN10025-2:2019
S355J2NZ25	EN10025-2:2019
S355J2NZ35	EN10025-2:2019
S355K2NZ15	EN10025-2:2019
S355K2NZ25	EN10025-2:2019
S355K2NZ35	EN10025-2:2019
S355J0C+N	EN10025-2:2019
S355J2C+N	EN10025-2:2019
S355K2C+N	EN10025-2:2019.

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355J2+N	VTAA060202E	1959600	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA060202F	1959600	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350401A	1960184	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350401B	1960184	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE350401C	1960184	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE790103B	1960179	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE790103C	1960179	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE860303A	1960193	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE860303B	1960193	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE860303C	1960193	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE860303D	1960193	EN10025-1:2004
Lamiera/ Plate	S355J2+N	ZTAE860303E	1960193	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021001A	1960230	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021001B	1960230	EN10025-1:2004
Lamiera/ Plate	S355J2+N	VTAA021001C	1960230	EN10025-1:2004

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:

- - ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:

- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

26/06/2024

Roberto Re

Managing Director
Metinvest Trametal spa
Metinvest Group

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724001443	123A90A	Q012400624

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani **01/08/2024**

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000900 **Rev. N°:** 0 **Date:**

Inspection Date: 19/07/2024

Ref.: 1724001443 123A90A

Our Job n. 324001820

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000		406,4X30,96	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52 PSL2					
				1	7,02	ARCELORMITTAL ROMAN	72581	B 28478/4
				1	7,08	ARCELORMITTAL ROMAN	72581	B 28478/4
			Total:	**2**	**14,1**			
30000		323,8X28,58	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52 PSL2					
				1	7,92	ARCELORMITTAL ROMAN	1233149	B 28729/2
				1	7,87	ARCELORMITTAL ROMAN	1233149	B 28729/2
				1	7,87	ARCELORMITTAL ROMAN	1233149	B 28729/2
			Total:	**3**	**23,66**			
40000		219,1X23,01	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				2	16,45	TMK - ARTROM	R62208	E4135
				2	16,27	TMK - ARTROM	R62208	E4135
				1	8,14	TMK - ARTROM	R62208	E4130

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

1706/ 3402

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000900 **Rev. N°:** 0 **Date:**

Inspection Date: 19/07/2024

Ref.: 1724001443 123A90A

Our Job n. 324001820

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**5**	**40,86**			
50000		219,1X18,26	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				2	16,15	TMK - ARTROM	R62209	E4131
				1	8,28	TMK - ARTROM	R62209	E4131
			Total:	**3**	**24,43**			
60000		168,3X14,27	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	9,95	LIBERTY OSTRAVA	55335KN	81992/23 R
			Total:	**1**	**9,95**			
80000		355,6X27,79	Tubi SS CARB. API 5L X52N/L360N PSL2					
				1	6,43	ARCELORMITTAL ROMAN	48673	D 7131/1
				1	6,24	ARCELORMITTAL ROMAN	48673	D 7131/1
			Total:	**2**	**12,67**			

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 22 LUG. 2024

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
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1707/ 3402

Approved by QUALITY1 on 18/11/19

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 12,67 HEAT 48673 DIMENSIONS 355,6 x 27,79

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.2/2004

Page 1/4
D 713/1
27.08.2013

ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC
28-A, SILVER TOWER, JUMEIRAH LAKES TOWERS, P.O. BOX 103921, DUBAI, U.A.E.
Tel: +971 4 4329537 (5 Lines), Fax: +971 4 4329536 E-mail: admin@kirtanlalae

SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE

Total weight:	Total Length:	Pieces	Bundles
19.915 tons 0 lbs	88.65 meters 0.00 feets	14	-

Standard: API 5L ED.44/ ISO 3183/2007-PSL2; API 5L ED.45/2012; SR EN 10210-1&2-2006; ASME B16.25/2012; ASME B36.10M/2004; NACE MR 0175/ISO 15156-1&2/2009;

Buyer's reference: KI/0029-2013-REV1
Contract 50001139

Dimensions: 355.60 x 27.79 mm / 14.000 x 1.094 inch
Schedule: -
Length: 5.50 - 6.50 m / 18.04 - 21.33 feet

Item	Item Client
33	AMR52S080

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	2970	20.5	5

Bill: -
Steel Grade: X52N / S355J2H -
Transport: -

Chemical Analysis(%)

Heat	Bulletin No.	Product		C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	Nb	Ti	B
			Max	0.22	1.40	0.45	0.015	0.025	0.30	0.30	0.50	0.10	0.100	0.050	0.030	0.0010
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-
48673		Heat analysis		0.13	1.20	0.27	0.004	0.011	0.06	0.10	0.19	0.02	0.060	0.001	0.000	0.0004
48673	13-1644	Product analysis		0.14	1.26	0.23	0.004	0.008	0.07	0.06	0.18	0.00	0.055	0.002	0.000	0.0000
48673	13-1644	Product analysis		0.14	1.25	0.23	0.004	0.009	0.06	0.06	0.18	0.00	0.055	0.002	0.000	0.0000

Chemical Analysis(%)

Heat	Bulletin No.	Product		Nb + Ti + V	CE_IIW
			Max	0.150	0.43
			Min	-	-
48673		Heat analysis		0.061	0.38
48673	13-1644	Product analysis		0.057	0.39
48673	13-1644	Product analysis		0.057	0.39

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Società Consortile ADVERTO CONSULTING Roman - Neamț
Inspector/Buyer representative

Approved by QUALITY1 on 18/11/19

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 12,67 HEAT 48673 DIMENSIONS 355,6 x 27,79

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004	Page 2/4 D 713/I 27.08.2013	ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC 28-A, SILVER TOWER, JUMEIRAH LAKES TOWERS, P.O. BOX 103921, DUBAI, U.A.E. Tel: +971 4 4329537 (5 Lines), Fax: +971 4 4329536 E-mail: admin@kirtanlal.ae	SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE	Total weight: 19.915 tons / 0 lbs	Total Length: 88.65 meters / 0.00 feets	Pieces 14	Bundles -

Buyer's reference	KI/0029-2013-REV1
Contract	50001139

Standard: API 5L ED.44/ ISO 3183/2007-PSL2; API 5L ED.45/2012; SR EN 10210-1&2-2006; ASME B16.25/2012; ASME B36.10M/2004; NACE MR 0175/ISO 15156-1&2/2009;

Dimensions: 355.60 x 27.79 mm / 14.000 x 1.094 inch	Schedule: -	Length: 5.50 - 6.50 m	18.04 - 21.33 feet

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52N / S355J2H
33	AMR52S080		205	2970	20.5	5	-

Tensile Test

Heat	Gauge	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS N/mm²	YS (PSI:1000)	UTS N/mm²	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
48673	Longitudinal Round	50.8	2	12.50	0.492	0.00	0.000	122.7	4.831	13-2337	361.00	52.4	527.00	76.4	35.60	0.69
48673	Longitudinal Round	-	-	10.00	0.394	0.00	0.000	78.5	3.091	13-2070	382.20	55.4	522.30	75.8	34.10	0.73
48673	Longitudinal Round	50.8	2	12.60	0.496	0.00	0.000	124.6	4.906	13-2117	435.00	63.1	549.00	79.6	26.10	0.79
48673	Longitudinal Round	-	-	10.00	0.394	0.00	0.000	78.5	3.091	13-1831	394.90	57.3	547.80	79.5	30.50	0.72

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm²-T:°C			Share Area min. %			Lateral Expansion min. mm		
48673	13-5224	Transversal	10x10x55	0	27	341	339	309	-	330	-	-	-	100	100	100	2.14	2.06	1.94
48673	13-5225	Longitudinal	10x10x55	-20	27	273	308	281	-	287	-	-	-	100	100	100	1.95	2.09	2.01
48673	13-4579	Transversal	10x10x55	0	27	151	145	149	-	148	-	-	-	95	95	95	1.38	1.43	1.41
48673	13-4580	Longitudinal	10x10x55	-20	27	105	116	110	-	110	-	-	-	90	90	90	1.38	1.46	1.40

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 2 2 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Inspector/Buyer representative

Formular 12A2, rev. 3

1709/ 3402

Approved by QUALITY1 on 18/11/19

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 12,67 HEAT 48673 DIMENSIONS 355,6 x 27,79

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004	Page 3/4 D 713/1 27.08.2013	ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC 28-A, SILVER TOWER, JUMEIRAH LAKES TOWERS, P.O. BOX 103921, DUBAI, U.A.E. Tel: +971 4 4329537 (5 Lines), Fax: +971 4 4329536 E-mail: admin@kirtanlal.ae	SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE.	Total weight: 19.915 tons 0 lbs	Total Length: 88.65 meters 0.00 feets	Pieces 14	Bundles -
Buyer's reference KI/0029-2013-REV1	Standard: API 5L ED.44/ ISO 3183/2007-PSL2; API 5L ED.45/2012; SR EN 10210-1&2-2006; ASME B16.25/2012; ASME B36.10M/2004; NACE MR 0175/ISO 15156-1&2/2009;				
Contract 50001139	Dimensions: 355.60 x 27.79 mm 14.000 x 1.094 inch	Schedule: -	Length: 5.50 - 6.50 m		18.04 - 21.33 feet

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52N / S355J2H
33	AMR52S080		205	2970	20.5	5	-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
48673	13-2291	-	-	-	-	-	-	-	<22
48673	13-2291	-	-	-	-	-	-	-	<22
48673	13-2291	-	-	-	-	-	-	-	<22
48673	13-2162	-	-	-	-	-	-	-	<22
48673	13-2162	-	-	-	-	-	-	-	<22
48673	13-2162	-	-	-	-	-	-	-	<22

Heat

Heat	Pieces	Length(m)	Weight(kg)
48673	14	-	-

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Inspector/Buyer representative

Formular 12A2, rev. 3

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 18/11/19

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004	Page 4/4 D 713/1 27.08.2013	ArcelorMittal

Buyer: KIRTANLAL INTERNATIONAL DMCC 28-A, SILVER TOWER, JUMEIRAH LAKES TOWERS, P.O. BOX 103921, DUBAI, U.A.E. Tel: +971 4 4329537 (5 Lines), Fax: +971 4 4329536 E-mail: admin@kirtanlal.ae	SEAMLESS CARBON STEEL PIPES, CFR JEBEL ALI, UAE	Total weight: 19.915 tons 0 lbs	Total Length: 88.65 meters 0.00 feets	Pieces 14	Bundles -

Buyer's reference KI/0029-2013-REVi	Standard: API 5L ED.44/ ISO 3183/2007-PSL2; API 5L ED.45/2012; SR EN 10210-1&2-2006; ASME B16.25/2012; ASME B36.10M/2004; NACE MR 0175/ISO 15156-1&2/2009;
Contract 50001139	Dimensions: 355.60 x 27.79 mm 14.000 x 1.094 inch — Schedule: - — Length: 5.50 - 6.50 m 18.04 - 21.33 feet

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52N / S355J2H -
33	AMR52S080		205	2970	20.5	5	

Remarks:

MARKING ON THE PIPES BY PAINTING:

ARCELORMITTAL TUBULAR PRODUCTS ROMAN - - 355.60 - 27.79 -

EN 10210-1/2- S355J2H

- Length(m) + Heat no. ... Serial no. ... + CTC die stamping + CE 0038 -13-0038/CPD/BUC 10 00067/A

Steel manufacturing process.
Hot finished, steel is fully killed and produced by electric furnace, Arcelor Mittal Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara.
Applied heat treatment: normalizing temperature of 870°C. time soaking 56 min.
Ultrasonic testing: Le+Li (12.5 % from W.T.) – satisfactory.
Wet magnetical particles testing on the pipe ends – satisfactory.
Magnetism residual max 35 Gauss.
Hydrostatic test hold for 5 sec. no leakage noticed.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

MARKING ON THE LABEL & INSPECTION CERTIFICATE:

CE
0038

ARCELORMITTAL
TUBULAR PRODUCTS ROMAN S.A.
STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1,
ROMAN, JUD. NEAMT, ROMANIA

13
0038/CPD/BUC1000067/A

EN 10210-1-2006
Steel hollow sections for building and civil engineering
Product designation : S355J2H
Dangerous substance As: Less than 0.2 ppm
Durability : NPD

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Eng. Iesanu Cristian

Societatea Comerciala ADVERTOC CONSULTING SRL Roman - Neamt

Inspector/Buyer representative

Formular 12A7 rev. 3

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°3240001820
N° 2 MT 12,67 HEAT 48673 DIMENSIONS 355,6 x 27,79

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 18/11/19

EC Declaration of Conformity

CE

The undersigned, representing the following :

Manufacturer: ArcelorMittal Tubular Products Roman S.A.

Manufacturing Plant: STR. STEFAN CEL MARE, BL. 15, SCARA A, PARTER 1, ROMAN, JUD. NEAMT, ROMANIA

Herewith declares that the product is in confromity with the provisions of the EC Directive 89/106/CEE (Construction Products Directive)

Provisions to which the product conforms: EN 10210-1-2006

Description of the product and information on regulated characteristics:

Seamless steel pipes according to EN 10210-1-2006/ S355J2H plain ends, outside unprotected.

Indentification: Quality Certificate no: D713/1 27-08-2013

Dimensions: 355.60 x 27.79 mm

Heat number	Pieces
48673	14

Serial number : see visual examination and measurement/ dispatch report.

The number of the accompanying factory production control system certificate:

0038/CPD/BUC1000067/A

Name of notified certification body: LLOYD'S REGISTER VERIFICATION

Name. Iesanu Cristian

Position : Quality Control Representative

Date: 27-08-2013

Signature:

BUREAU VERITAS ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°32400182O
N° 2 MT 12,67 HEAT 48673 DIMENSIONS 355,6 x 27,79

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05198 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.
Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.
Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05557	820/6	TEST COUPON FROM PIPE O.D. 355.6 mm WTH. 27.79 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 355.6 mm WTH. 27.79 mm	API 5L 46th Ed. X52 PSL2	820/6	24CA05557	48673

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI Albo degli Ingegneri Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05198

Data Date JULY, 30/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24**

Data delle prove – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm^2	mm		°C	MPa	MPa	MPa	MPa	%	%		
820/6	24CA05557	24PR25133	Ø 12.47	122.13	50	TM	+ 25	≥ 360 ≤ 530	361	≥ 460 ≤ 760	528	≥ 20.6	36.8	≤0,93	0.68

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05198 Data / Date JULY, 30/2024 Pagina / Page 3 di / of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** Data delle prove – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA				ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
820/6	24CA05557	24PR25132	10x10x55	BLM	-20	≥ 27/27	255	316	282	284									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALIA WITNESSED NOTED REVIEWED SURVEYOR DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 14,1 HEAT 72581 DIMENSIONS 406,4 x 30,96

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 28478/4
27.02.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
4.042 tons - lbs	14.10 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 406.40 x 30.96 mm
-

Schedule: 120

Length: 6.00 - 8.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
72581		Heat analysis		0.15	1.20	0.20	0.003	0.014	0.09	0.05	0.15	0.037	0.01	0.063	0.002	0.001	0.0003	0.0078
72581	23-1050	Product analysis		0.14	1.22	0.21	0.003	0.013	0.08	0.04	0.15	0.035	0.01	0.062	0.002	0.002	0.0003	0.0082
72581	23-1050	Product analysis		0.14	1.21	0.20	0.003	0.013	0.08	0.04	0.15	0.036	0.01	0.063	0.002	0.002	0.0003	0.0082

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
72581		Heat analysis		4.74	0.065	0.066	0.316	0.39	0.25
72581	23-1050	Product analysis		4.27	0.064	0.066	0.306	0.39	0.24
72581	23-1050	Product analysis		4.39	0.065	0.067	0.307	0.38	0.24

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A_rev.9

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Approved by QUALITY1 on 28/02/24

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 14,1 HEAT 72581 DIMENSIONS 406,4 x 30,96

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/4
B 28478/4
27.02.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
4.042 tons - lbs	14.10 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 406.40 x 30.96 mm
-

Schedule: 120

Length: 6.00 - 8.00 m
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm^2	$inch^2$							
72581	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3059	396.00	-	518.00	-	36.40	0.76
72581	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3059	398.00	-	517.00	-	36.80	0.77
72581	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	23-1726	392.40	-	515.90	-	32.10	0.76

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm^2 T:°C			Shear Area min. %			Lateral Expansion min. mm		
72581	23-3948	Transversal	10x10x55	0	-	208	193	225	27.0	209	-	-	-	100	95	100	1.86	1.72	1.94
72581	23-3949	Longitudinal	10x10x55	-52	27.0	197	211	232	40.0	213	-	-	-	95	100	100	1.76	1.88	1.97

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
72581	23-3574	-	-	-	-	-	-	-	<20
72581	23-3574	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR
DATE 22 LUG. 2024

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Quality Control Representative

Formular 12A rev.9

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Approved by QUALITY1 on 28/02/24

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 2 MT 14.1 HEAT 72581 DIMENSIONS 406.4 x 30.96

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 28478/4
27.02.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
4.042 tons - lbs	14.10 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 406.40 x 30.96 mm
-

Schedule: 120

Length: 6.00 - 8.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
72581	23-955	450	287.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
72581	23-2927	OK
72581	23-2927	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
72581	23-522	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
72581	2	14.10	4042

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

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Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 28/02/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 28478/4

27.02.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
4.042 tons - lbs	14.10 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668

Contract 50005988

Dimensions: 406.40 x 30.96 mm
-

Schedule: 120

Length: 6.00 - 8.00 m
-

-
-

Item	Item Client
24	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 36 min.
MT testing: Le (12.5 % from W.T.) – satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALIA
WITNESSED NOTED REVIEWED
SURVEYOR
DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 28/02/24

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05193 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.
Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.
Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05552	820/1	TEST COUPON FROM PIPE O.D. 406.4 mm WTH. 30.96 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.4 mm WTH. 30.96 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	820/1	24CA05552	72581

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05193 Data / Date JULY, 30/2024 Pagina / Page 3 di / of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min, Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
820/1	24CA05552	24PR25123	10x10x55	BLM	-50	≥ 27/27	180	149	157	162									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP05193

Data / Date: JULY, 30/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24**

Data delle prove – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
			ASTM A333/A333M-24 Gr. 6					≥ 240		≥ 415		≥ 12			
			API 5L 46th Ed. X52 PSL2					≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.6		≤0.93	
820/1	24CA05552	24PR25122	Ø 12.40	120.76	50	TM	+ 25		376		536		34.4		0.70

Note:
Notes:
REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 1 MT 9,95 HEAT 55335KN DIMENSIONS 168,3 x 14,27

A02 **Inspection certificate "3.1" (EN 10 204)**

LIBERTY

A03 Document No.: **81992/23 R**

A07	Customer's Order (P.O.) No./Item No.: **OF230361**	A08	Manufacturer's Works Order No.: **59243/0/23**
A11	Supplier's Order No.: **3151030628**	A10	Advice - Note No.: **8151004266**
B08, B12/13	Quantity delivered: pcs / bdls: **29**; mtrs / feet: **286,463**; B13 Actual mass kgs / lbs: **15454**	A06	Customer / Consignee: T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 6-ZONA IND. 29017 FIORENZUOLA ARDA Italy
B09-11	Dimensions: **168,28 X 14,27 mm (6" SCH120)**		
B02	Steel designation: **L360/X52 PSL1 Grade 6**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes,
ASME B36.10M-22, ASTM A999/A999M-18, ASME SA999/SA999M-21,
API Spec.5L-46th edit.18 PSL1, EN ISO 3183/19, ASTM A333/A333M-18, ASME SA333/SA333M-21 – PED 2014/68/EU;
ASME II Part.D Table Y1-11a. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-1S.
Normalized (min. 860°C). **TS02 Rev.6 for T.A.L.+ LO deviation**

BUREAU VERITAS ITALY — NOTED REVIEWED — SURVEYOR F. BOTTI — DATE 22 LUG. 2024

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 1

C71-97 Heat (H) and product (P) chemical analyses (%) — C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	AL	MO	V	TI	NB	CEQ
55187KN	H	0,15	1,32	0,199	0,015	0,009	0,08	0,09	0,05	0,028	0,016	0,048	0,002	<0,003	0,41
	P	0,16	1,31	0,195	0,015	0,009	0,08	0,09	0,05	0,028	0,016	0,048	0,002	<0,001	0,41
	P	0,16	1,32	0,195	0,015	0,009	0,08	0,09	0,04	0,028	0,015	0,048	0,002	<0,001	0,41
55335KN	H	0,16	1,28	0,193	0,016	0,006	0,06	0,09	0,05	0,025	0,009	0,044	0,002	0,001	0,40
	P	0,17	1,27	0,190	0,016	0,006	0,05	0,10	0,05	0,023	0,010	0,043	0,002	<0,001	0,41
	P	0,16	1,28	0,190	0,016	0,006	0,05	0,10	0,05	0,023	0,010	0,043	0,002	<0,001	0,40

Z99

B07 Heat No. C00 Specimen No. / C04 Requirements:		MPa C11 Yield Point	MPa C12 Tensile Strength	% (2") C13 Elongation	C40-43 Impact test				HRB C30-32 Hardness
					Ø	min			
Requirements: L360/X52 Grade 6		min. 360	min. 460	min. 26,0	A) L-10-40J / - 52°C				max. 99
		min. 240	min. 415	min. 30,0	B) INF: SHEAR AREA (%)				
		Longitudinal strip specimen 25,4 mm							
55187KN		394	523	36,9	A) 134	121	152	130	80 80
		392	525	39,2	B) 53	47	59	53	
55335KN		424	547	38,4	A) 145	140	156	140	81 82
		419	539	34,1	B) 54	52	59	51	

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	20,5 / 5
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT In acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test - satisfactory				

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2011, ISO 45001:2018.

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.

Residual magnetic field [mT] max.3 - satisfactory MANUFACTURER OF BILLETS: LIBERTY OSTRAVA

Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.

22HRC=99HRBmax. Grain size min. 7 acc. ASTM E112 is guaranteed. Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1.

Elongation (A5) = min. 14% guaranteed ($L0 = 5.65 * \sqrt{S0}$) Heat: 55187K – 8pc, 79,542m; Heat: 55335K – 21pc, 206,921m;

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of Issue **27.07.2023/TR**

Tel.:++420 595683644

LIBERTY

Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E z. 2574/16/15/P

Approved by QUALITY2 on 27/07/23

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L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05197 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

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Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05556	820/5	TEST COUPON FROM PIPE O.D. 168.3 mm WTH. 14.27 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 168.3 mm WTH. 14.27 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL1	820/5	24CA05556	55335KN

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05197

Data Date JULY, 30/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24**

Data delle prove – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-24 Gr. 6						≥ 240		≥ 415		≥ 30			
		API 5L 46th Ed. X52 PSL1						≥ 360		≥ 460		≥ 20.6		Info.	
820/5	24CA05556	24PR25131	Ø 12.51	122.91	50	LM	+ 25		384		533		29.2		0.72

Note:
Notes: REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL1.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm . O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO Degli INGEGNERI PROV. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05197 Data / Date JULY, 30/2024 Pagina / Page 3 di / of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** Data delle prove – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
820/5	24CA05556	24PR25130	10x10x55	BLM	-50	≥ 27/27	267	227	189	228									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOT REVIEWED SURVEYOR F. ROTTI DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – PROV. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 3 MT 23,66 HEAT 1233149 DIMENSIONS 323,8 x 28,58

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 28729/2
06.11.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
6.568 tons - lbs	31.56 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 323.80 x 28.58 mm
-

Schedule: 140

Length: 6.00 - 8.00 m
-

-
-

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
1233149		Heat analysis		0.14	1.25	0.22	0.003	0.011	0.08	0.09	0.16	0.033	0.01	0.069	0.002	0.003	0.0003	0.0048
1233149	23-985	Product analysis		0.14	1.26	0.22	0.003	0.011	0.08	0.09	0.15	0.035	0.01	0.067	0.002	0.002	0.0002	0.0051
1233149	23-985	Product analysis		0.14	1.26	0.23	0.003	0.010	0.08	0.08	0.15	0.036	0.01	0.067	0.002	0.002	0.0002	0.0049

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
1233149		Heat analysis		6.88	0.071	0.074	0.328	0.40	0.25
1233149	23-985	Product analysis		6.86	0.069	0.071	0.311	0.40	0.24
1233149	23-985	Product analysis		7.35	0.069	0.071	0.311	0.40	0.24

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 09/11/23

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 3 MT 23,66 HEAT 1233149 DIMENSIONS 323,8 x 28,58

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 2/4 **B 28729/2** **06.11.2023**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 6.568 tons - lbs	Total Length: 31.56 meters - feets	Pieces: 4 Bundles: -

Buyer's reference	PO NO. : OF230668
Contract	**50005988**

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions:	Schedule:	Length:	
323.80 x 28.58 mm -	140	6.00 - 8.00 m -	- -

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
1233149	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3061	395.00	-	518.00	-	36.40	0.76
1233149	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	23-3061	393.00	-	519.00	-	35.80	0.76
1233149	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	23-1728	391.10	-	515.90	-	31.30	0.76

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
1233149	23-3952	Transversal	10x10x55	0	-	199	213	224	27.0	212	-	-	-	95	100	100	1.78	1.89	1.94
1233149	23-3953	Longitudinal	10x10x55	-52	27.0	206	228	239	40.0	224	-	-	-	100	100	100	1.84	1.95	2.01

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
1233149	23-3576	-	-	-	-	-	-	-	<20
1233149	23-3576	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 09/11/23

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ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 3 MT 23,66 HEAT 1233149 DIMENSIONS 323,8 x 28,58

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 28729/2
06.11.2023

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
6.568 tons - lbs	31.56 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF230668
Contract 50005988

Dimensions: 323.80 x 28.58 mm
-
Schedule: 140
Length: 6.00 - 8.00 m
-
-
-

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
1233149	23-957	450	286.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
1233149	23-2929	OK
1233149	23-2929	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
1233149	23-524	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
1233149	4	31.56	6568

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 09/11/23

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 28729/2 06.11.2023	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 6.568 tons - lbs	Total Length: 31.56 meters - feets	Pieces 4	Bundles -

Buyer's reference: PO NO. - OF230668	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2017; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;		
Contract 50005988	Dimensions: 323.80 x 28.58 mm -	Schedule: 140	Length: 6.00 - 8.00 m - - -

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX I, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Interpipe Europe SA(Producator: Dneprosteel Ucraina) Via San Salvatore 13, PO Box 745 CH-6902 PARADISO-LUGANO SWITZERLAND .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 28 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
..Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 22 LUG. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A. rev.9

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Approved by QUALITY1 on 09/11/23

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05194 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.
Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.
Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05553	820/2	TEST COUPON FROM PIPE O.D. 323.8 mm WTH. 28.58 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 323.8 mm WTH. 28.58 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	820/2	24CA05553	1233149

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS WITNESSED NOTED REVIEWED SURVEYOR DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05194 | **Data** Date JULY, 30/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
			ASTM A333/A333M-24 Gr. 6					≥ 240		≥ 415		≥ 12			
			API 5L 46th Ed. X52 PSL2					≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.6		≤0.93	
820/2	24CA05553	24PR25125	Ø 12.38	120.37	50	TM	+ 25		374		540		34.0		0.69

Note: / Notes: REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Legenda: / Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05194 | **Data** Date JULY, 30/2024 | **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** | Data delle prove – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
No.	No.	No.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
820/2	24CA05553	24PR25124	10x10x55	BLM	-50	≥ 27/27	224	174	209	202									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05195 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

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Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.
Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.
Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05554	820/3	TEST COUPON FROM PIPE O.D. 219.1 mm WTH. 23.01 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 23.01 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	820/3	24CA05554	R62208

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05195 | Data / Date: JULY, 30/2024 | Pagina / Page: 2 di / of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | Data delle prove – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-24 Gr. 6						≥ 240		≥ 415		≥ 12			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.6		≤0.93	
820/3	24CA05554	24PR25127	Ø 12.36	119.98	50	TM	+ 25		377		557		29.6		0.68

Note:
Notes: REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP05195 **Data** Date JULY, 30/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min, Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
820/3	24CA05554	24PR25126	10x10x55	BLM	-50	≥ 27/27	181	175	166	174										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 1 MT 8,14 HEAT R62208 DIMENSIONS 219,1 x 23,01

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No.: E4130 Date: 04.03.2024 Page 1/2	Manufacturer's mark:	Customer order no.: OF240047	PL: 11195

CUSTOMER: T.A.L. TUBI ACCIAIO LOMBARDA con socio unico

Specifications: API 5L 46th Ed. April 2018 ASTM A333-18; ASME SA333-21; ASTM A999-23; ASME SA999-21; ASME B36.10M-18; ASME Section II part. D tab. Y1-19; EN 10216-3: 13; PED 2014/68/EU (Appendix 1, par. 7.5); TS 02 REV. 07 dtd. 13 July 2023	Dimensions: 219.1 x 23.01 x 8 000 to 9 300 mm Steel, PSL: Gr.X52N / L360N PSL2 Steel: Gr.6 / P355NL1 TC2

Description: Hot rolled seamless steel pipes with bevelled ends ASME B16.25; clear lacquered; marking by painting: ARTROM, manufacturer's mark, API Spec 5L, SPEC.5L-1271, API-monogram, date, dimensions, steel grade, SMLS, heat no., LOT, LENGTH (m), mill inspector no. 2, technical control sign // standard, steel grade, S, 111.27 Kg/m, 8" SCH 160, TEST PRESSURE 20.5 MPa/NDE, HF, S, LT-45; marking at one end: heat no., LOT

Heat no.: R62208	Lot no.: 542003	Steel melt and rolled in ROMANIA

Quantity	Pcs	Length m	Weight kg
	10	81.78	9200

Ladle Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B
0.17	1.18	0.005	0.015	0.23	0.09	0.08	0.02	0.25	0.022	0.001	0.001	0.009	0.048	0.0005

Nb+V+Ti: 0.050	Nb+V: 0.049	Cu+Mo+Cr: 0.35	CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15=0.419

Product Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
0.17	1.18	0.005	0.014	0.23	0.08	0.08	0.01	0.24	0.023	0.002	0.002	0.052	0.0005
0.17	1.19	0.006	0.013	0.23	0.08	0.07	0.01	0.24	0.022	0.001	0.002	0.052	0.0005

CE= 1. 0.416 / 2. 0.416

Mechanical Properties

TENSILE TEST (1. ASTM A370 / 2. EN ISO 6892-1) - at room temperature - Test Specimen / 1. Round-longitudinal / 2. Strip - Longitudinal	Rp0.2 MPa	Rt0.5 MPa	Rm MPa	Elongation %
Dimension – Specimen (mm): 1.1. 12.70 / 1.2. 12.72 / 2. 8.50 x 22.70	1.1. –	381	523	32
Section – Specimen (mm²): 1.1. 126.60 / 1.2. 127.00 / 2. 193.01	1.2. –	385	538	31
Length – Specimen (Lo) (mm): 1.1. 50.8 / 1.2. 50.8 / 2. 80	2. 391	-	540	32

Heat treatment: normalised with min. 900°C and cooled in still air Hydraulic test pressure (API 5L/ASTM/ASME A/SA 999): 20.5 MPa for 5 sec: OK UT acc. to ASTM E213:2022 / EN ISO 10893:10:2011/A1:2020, U2/C / API 5L 46th Ed, annex E: OK Flattening test (ASTM 999): OK Ring tensile test (EN ISO 8496): OK	Charpy V-Notch (ASTM A370) Transversal 10 x 10 [mm] 68 (80; 63; 61) [J] (-52°C) 115 (122; 113; 110) [J] (0°C) Longitudinal 10 x 10 [mm] 94 (87; 93; 101) [J] (-52°C) 106 (108; 113; 96) [J] (-45°C) Shear area ASTM A370 [-45°C]: 100 (100; 100; 100) [%] (EN ISO 148-1) Transversal 10 x 10 [mm] 101 (98; 112; 93) [J] (-40°C)	Process of melting-electric arc furnace, fully killed Hardness HBW: 161 – 164 Hardness HRC max. 22 (acc. to NACE MR0175/ISO 15156:2022 / NACE MR0103/ISO 17945:2015 par. 13.1.1 & 13.1.3) Residual magnetism: max. 30 Gauss Grain size (ASTM E112): 8.5
Hot yield strength at 538°C: 193 MPa (Round longitudinal 10.01 = 78.69 mm²)		

BUREAU VERITAS ITALY
~~CHECKED NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

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ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 1 MT 8,14 HEAT R62208 DIMENSIONS 219,1 x 23,01

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
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E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

No.: E4130 Date: 04.03.2024 Page 2/2	Manufacturer's mark:	Customer order no.: OF2240047	PL: 11195

Visual inspection and dimensional check: OK
The elongation after rupture is no less than 16% according to PED ANNEX I 7.5 with Lo=5.65 x √So.
The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018
NO WELD REPAIR ON HEREBY CERTIFIED TUBES
The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"
THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY RESPECTIVELY ARE FREE FROM ADDITIONAL IONIC RADIATION

Our tubes are rolled from steel with low carbon footprint, carefully melted in our own Romanian facilities only by recycling the ferrous scrap.

Our products mentioned on this document do not incorporate steel products originating in Russia, fully complying with the Regulation (EU) No 833/2014

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Iulian Andrei

This MTC is digitally signed and sealed by ARTROM STEEL TUBES S.A. IT system. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by ARTROM STEEL TUBES S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT. THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

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ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 4 MT 32,72 HEAT R62208 DIMENSIONS 219,1 x 23,01

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

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E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No.: E4135 Date: 04.03.2024 Page 1/2	Manufacturer's mark:	Customer order no.: OF240047	PL: 11197

CUSTOMER: T.A.L. TUBI ACCIAIO LOMBARDA con socio unico

Specifications: API 5L 46th Ed. April 2018 ASTM A333-18; ASME SA333-21; ASTM A999-23; ASME SA999-21; ASME B36.10M-18; ASME Section II part. D tab. Y1-19; EN 10216-3: 13; PED 2014/68/EU (Appendix 1, par. 7.5); TS 02 REV. 07 dtd. 13 July 2023	Dimensions: 219.1 x 23.01 x 8 000 to 9 300 mm Steel, PSL: Gr.X52N / L360N PSL2 Steel: Gr.6 / P355NL1 TC2

Description: Hot rolled seamless steel pipes with bevelled ends ASME B16.25; clear lacquered; marking by painting: ARTROM, manufacturer's mark, API Spec 5L, SPEC.5L-1271, API-monogram, date, dimensions, steel grade, SMLS, heat no., LOT, LENGTH (m), mill inspector no. 2, technical control sign // standard, steel grade, S, 111.27 Kg/m, 8" SCH 160, TEST PRESSURE 20.5 MPa/NDE,HF, S, LT-45; marking at one end: heat no., LOT

Heat no.: R62208	Lot no.: 542003	Steel melt and rolled in ROMANIA

Quantity	Pcs	Length m	Weight kg
	4	32.72	3676

Ladle Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B
0.17	1.18	0.005	0.015	0.23	0.09	0.08	0.02	0.25	0.022	0.001	0.001	0.009	0.048	0.0005

Nb+V+Ti: 0.050 | Nb+V: 0.049 | Cu+Mo+Cr: 0.35 | CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15=0.419

Product Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
0.17	1.18	0.005	0.014	0.23	0.08	0.08	0.01	0.24	0.023	0.002	0.002	0.052	0.0005
0.17	1.19	0.006	0.013	0.23	0.08	0.07	0.01	0.24	0.022	0.001	0.002	0.052	0.0005

CE= 1. 0.416 / 2. 0.416

Mechanical Properties

TENSILE TEST (1. ASTM A370 / 2. EN ISO 6892-1) - at room temperature - Test Specimen / 1. Round–longitudinal / 2. Strip - Longitudinal	Rp0.2 MPa	Rt0.5 MPa	Rm MPa	Elongation %
Dimension – Specimen (mm): 1.1. 12.70 / 1.2. 12.72 / 2. 8.50 x 22.70	1.1. –	381	523	32
Section – Specimen (mm²): 1.1. 126.60 / 1.2. 127.00 / 2. 193.01	1.2. –	385	538	31
Length – Specimen (Lo) (mm): 1.1. 50.8 / 1.2. 50.8 / 2. 80	2. 391	-	540	32

Heat treatment: normalised with min. 900°C and cooled in still air
Hydraulic test pressure (API 5L/ASTM/ASME A/SA 999): 20.5 MPa for 5 sec: OK
UT acc. to ASTM E213:2022 / EN ISO 10893-10:2011/A1:2020, U2/C / API 5L 46th Ed., annex E: OK
Flattening test (ASTM 999): OK
Ring tensile test (EN ISO 8496): OK

Charpy V-Notch
(ASTM A370)
Transversal 10 x 10 [mm]
68 (80; 63; 61) [J] (-52°C)
115 (122; 113; 110) [J] (0°C)
Longitudinal 10 x 10 [mm]
94 (87; 93; 101) [J] (-52°C)
106 (108; 113; 96) [J] (-45°C)
Shear area ASTM A370 [-45°C]:
100 (100; 100; 100) [%]
(EN ISO 148-1)
Transversal 10 x 10 [mm]
101 (98; 112; 93) [J] (-40°C)

Process of melting–electric arc furnace, fully killed
Hardness HBW: 161 – 164
Hardness HRC max. 22
(acc. to NACE MR0175/ISO 15156:2022 / NACE MR0103/ISO 17945:2015 par. 13.1.1 & 13.1.3)
Residual magnetism: max. 30 Gauss
Grain size (ASTM E112): 8.5

Hot yield strength at 538°C: 193 MPa (Round longitudinal 10.01 = 78.69 mm²)

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

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ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 4 MT 32,72 HEAT R62208 DIMENSIONS 219,1 x 23,01

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

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Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

No.: E4135 Date: 04.03.2024 Page 2/2	Manufacturer's mark:	Customer order no.: OF2240047	PL: 11197

Visual inspection and dimensional check: OK
The elongation after rupture is no less than 16% according to PED ANNEX I 7.5 with Lo=5.65 x √So.
The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018
NO WELD REPAIR ON HEREBY CERTIFIED TUBES
The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"
THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY RESPECTIVELY ARE FREE FROM ADDITIONAL IONIC RADIATION

Our tubes are rolled from steel with low carbon footprint, carefully melted in our own Romanian facilities only by recycling the ferrous scrap.

Our products mentioned on this document do not incorporate steel products originating in Russia, fully complying with the Regulation (EU) No 833/2014

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR
Eng. Iulian Andrei

This MTC is digitally signed and sealed by ARTROM STEEL TUBES S.A. IT system. To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by ARTROM STEEL TUBES S.A. Falsification of this document is punishable under the legal provisions and entitles us to claim damages.

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

BUREAU VERITAS
ITALY
~~WITNESSED~~ NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 3 MT 24,43 HEAT R62209 DIMENSIONS 219,1 x 18,26

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
E-mail: office.slatina@artrom.com www.artrom.com
EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No.: E4131 Date: 04.03.2024 Page 1/2	Manufacturer's mark:	Customer order no.: OF240047	PL: 11195

CUSTOMER: T.A.L. TUBI ACCIAIO LOMBARDA con socio unico

Specifications: API 5L 46th Ed. April 2018 ASTM A333-18; ASME SA333-21; ASTM A999-23; ASME SA999-21; ASME B36.10M-18; ASME Section II part. D tab. Y1-19; EN 10216-3: 13; PED 2014/68/EU (Appendix 1, par. 7.5); TS 02 REV. 07 dtd. 13 July 2023	Dimensions: 219.1 x 18.26 x 8 000 to 9 300 mm Steel, PSL: Gr.X52N / L360N PSL2 Steel: Gr.6 / P355NL1 TC2

Description: Hot rolled seamless steel pipes with bevelled ends ASME B16.25; clear lacquered; marking by painting: ARTROM, manufacturer's mark, API Spec 5L, SPEC.5L-1271, API-monogram, date, dimensions, steel grade, SMLS, heat no., LOT, LENGTH (m), mill inspector no. 2, technical control sign // standard, steel grade, S, 90.44 Kg/m, 8" SCH 120, TEST PRESSURE 20.5 MPa/NDE, HF, S, LT-45: marking at one end: heat no., LOT

Heat no.: R62209	Lot no.: 541624	Steel melt and rolled in ROMANIA

Quantity	Pcs	Length m	Weight kg
	8	65.91	5820

Ladle Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B
0.17	1.18	0.005	0.020	0.25	0.09	0.09	0.02	0.24	0.023	0.001	0.002	0.009	0.044	0.0005

Nb+V+Ti: 0.047	Nb+V: 0.045	Cu+Mo+Cr: 0.35	CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15=0.419

Product Chemical Analyse (%)

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
0.18	1.18	0.005	0.015	0.24	0.08	0.10	0.01	0.23	0.023	0.002	0.002	0.048	0.0005
0.18	1.17	0.005	0.015	0.25	0.08	0.10	0.01	0.23	0.023	0.001	0.001	0.048	0.0005

CE= 1. 0.428 / 2. 0.427

Mechanical Properties

TENSILE TEST (1. ASTM A370 / 2. EN ISO 6892-1) - at room temperature - Test Specimen / 1. Round-longitudinal / 2. Strip - Longitudinal	Rp0.2 MPa	Rt0.5 MPa	Rm MPa	Elongation %
Dimension – Specimen (mm): 1.1. 12.69 / 1.2. 12.68 / 2. 8.05 x 18.00	1.1. –	391	536	31
Section – Specimen (mm²): 1.1. 126.40 / 1.2. 126.20 / 2. 144.94	1.2. –	385	538	32
Length – Specimen (Lo) (mm): 1.1. 50.8 / 1.2. 50.8 / 2. 70	2. 379	-	529	32

Heat treatment: normalised with min. 900°C and cooled in still air Hydraulic test pressure (API 5L/ASTM/ASME A/SA 999): 20.5 MPa for 5 sec: OK UT acc. to ASTM E213:2022 / EN ISO 10893-10:2011/A1:2020, U2/C / API 5L 46th Ed, annex E: OK Flattening test (ASTM 999): OK Ring tensile test (EN ISO 8496): OK	Charpy V-Notch (ASTM A370) Transversal 10 x 10 [mm] 79 (90; 76; 71) [J] (-52°C) 125 (126; 119; 131) [J] (0°C) Longitudinal 10 x 10 [mm] 95 (103; 89; 94) [J] (-52°C) 116 (115; 121; 113) [J] (-45°C) Shear area ASTM A370 [-45°C]: 100 (100; 100; 100) [%] (EN ISO 148-1) Transversal 10 x 10 [mm] 106 (108; 96; 114) [J] (-40°C)	Process of melting–electric arc furnace, fully killed Hardness HBW: 158 – 161 Hardness HRC max. 22 (acc. to NACE MR0175/ISO 15156:2022 / NACE MR0103/ISO 17945:2015 par. 13.1.1 & 13.1.3) Residual magnetism: max. 30 Gauss Grain size (ASTM E112): 8.5
Hot yield strength at 538°C: 213 MPa (Round longitudinal 10.01 = 78.69 mm²)		

BUREAU VERITAS ITALIA
WITNESS - NOTED - REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

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ROSETTI MARINO S.P.A. P.O.1724001443 123A90A TAL JOB N°324001820
N° 3 MT 24,43 HEAT R62209 DIMENSIONS 219,1 x 18,26

COD QC-3.1-ED.3 REV. 1/2023

ARTROM STEEL TUBES S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119
Tel: +40 (249) 436862, 434640, 434641 Fax: +40 (249) 434330, 437288
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EUID: ROONRC.J28/9/1991; J28/9/31.01.1991 VAT No. RO 1510210/1992
Subscribed and Paid Share Capital: 291.587.538,34 lei

No.: E4131 **Date: 04.03.2024** **Page 2/2**	**Manufacturer's mark:**	**Customer order no.:** **OF2240047**	**PL: 11195**

Visual inspection and dimensional check: OK
The elongation after rupture is no less than 16% according to PED ANNEX I 7.5 with Lo=5.65 x √So.
The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018
NO WELD REPAIR ON HEREBY CERTIFIED TUBES
The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"
THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY RESPECTIVELY ARE FREE FROM ADDITIONAL IONIC RADIATION

Our tubes are rolled from steel with low carbon footprint, carefully melted in our own Romanian facilities only by recycling the ferrous scrap.

Our products mentioned on this document do not incorporate steel products originating in Russia, fully complying with the Regulation (EU) No 833/2014

CHIEF OF QC & TESTING OF THE METALLURGICAL TUBES PRODUCTS
Dipl. Eng. Silviu Barbulescu

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BUREAU VERITAS ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 22 LUG. 2024

Approved by S.COZZANI on 13/03/24

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L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05196 | **Data** Date JULY, 30/2024 | **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.
Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.
Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324001820
L.P.M. ORDER: 24-001796

Riferimento del cliente Customer's reference: ROSETTI MARINO PO: 1724001443 123A90A

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 22/07/2024 DDT: 202404481

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA05555	820/4	TEST COUPON FROM PIPE O.D. 219.1 mm WTH. 18.26 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 18.26 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	820/4	24CA05555	R62209

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/082

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.PERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05196 | Data / Date: JULY, 30/2024 | Pagina / Page: 2 di / of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | Data delle prove – Date of testing: **JULY,30/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
		ASTM A333/A333M-24 Gr. 6						≥ 240		≥ 415		≥ 12			
		API 5L 46th Ed. X52 PSL2						≥ 360 ≤ 530		≥ 460 ≤ 760		≥ 20.6		≤0.93	
820/4	24CA05555	24PR25129	Ø 8.73	59.86	35	TM	+ 25		369		552		32.6		0.67

Note:
Notes: REQUIREMENTS ACC. TO ASTM A333/A333M-24 AND API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 30 LUG. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA n. 824 Prov. PIACENZA

L.P.M. s.n.c.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP05196 Data / Date JULY, 30/2024 Pagina / Page 3 di / of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **JULY, 30/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
No.	No.	No.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
820/4	24CA05555	24PR25128	10x10x55	BLM	-50	≥ 27/27	159	154	166	160									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/082.

Note:
Notes:

Fine rapporto di prova / End of test report.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 30 LUG. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724001443	123A90A	Q012400962

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 15.11.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

vallourec

Vallourec - Tuberie d'Aulnoye

Laurent BELLENGIER
Laboratory and certificate Manager
laurent.bellengier@vallourec.com

Ref.: LB/45-2024

Object:	INSPECTION CERTIFICATE
Customer:	T.A.L
Our Order No :	278097 item 01
MTR No:	1049Au24
Orderer-No :	OF240526
Orderer:	T.A.L. S.p.A TUBI ACCIAIO LOMBARDA / I-29017 FIORENZUOLA D'ARDA (PC)

Aulnoye, November 19h, 2024

STATEMENT

We, ***VALLOUREC TUBES FRANCE,*** confirm that for the order 278097 item 01, the mechanical tests of tubes of certificate 1049Au24 are in accordance with API 5L PSL2 (2018)

The mechanicals tests below were done in the presence of TUV inspector

1) Tensile test
2) Impact test

Best regards,

L. BELLENGIER

vallourec
VALLOUREC TUBES France
Tuberie d'Aulnoye
64 rue de Leval
59620 AULNOYE-AYMERIES

TUV Inspector

KAIKIS Ascel
19/11/24

Approved by QUALITY2 on 03/12/24

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Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 1 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(A01) **Vallourec Tubes France**	(A08.1) **Vallourec-Order-No.** 278097 (A08.2) **Suborder**
(A06.1) **Consignee** ROSETTI MARINO SPA VIA TRIESTE 230 I-48121 RAVENNA	
(A06.2) **Orderer** T.A.L. S.p.A TUBI ACCIAIO LOMBARDA / I-29017 FIORENZUOLA D'ARDA (PC)	(A07.2) **Orderer Order-No.** OF240526 19.07.2024

(B01, B02, B04) **Description of the product**	Hot finished seamless Line pipes API 5L, PSL 2, April 2018 Rev. 46 (E1) API 5L Annex C, E API 5L Annex A, O, API Monogram ASME B36.10:2022 X52Q, API 5L, PSL2 Square cut squareness to the tube axis, max. 1.6 mm End 1: Plain end square cut, deburred End1 protection : Plastic cap, installed on end End 2: Plain end square cut, deburred End2 protection : Plastic cap, installed on end Without inside rust protection Outside with dry varnish Standard mass tolerances: min. -1.75 % for items of at least 18000 kg
(A10) **Inspection by**	TPI
PFP pipes Aulnoye	

(A13) Vallourec Item	(A09) **Orderer Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
1	10		API 5L OD 406.4 x WT 36.53 mm OD Tol ± 0.75 % WT Tol. : from -10 % to 3.7 mm, localised up to 5.5265 mm allowed	Random length from 9000 to 11000 mm Without short length

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 2 / 7 Date: 21.11.2024

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(A13) Vallourec Item	(A09) **Orderer Item**	(B08) Quantity P	(B11) Total length M	(B13) Weight kg
1	10	4	38.891	13 136

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min	-	-	-	-	-	-	-	-	-	-	-
max	-	0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189862	Electric (EAF)	0.15	0.34	1.24	0.011	0.004	0.21	0.02	0.10	0.14	0.003
189863	Electric (EAF)	0.14	0.33	1.26	0.010	0.001	0.23	0.02	0.07	0.13	0.003

(B07.1) Heat	Nb(Cb) %	V %	B %									
min	-	-	-									
max	0.05	0.07	0.001									
189862	0.01	0.06	0.0003									
189863	0.01	0.06	0.0002									

Heats fully killed

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min		-	-	-	-	-	-	-	-	-	-
max		0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189862	81834B 163 407189U	0.15	0.35	1.19	0.012	0.005	0.20	0.02	0.11	0.13	0.004
189862	85516 165 407922R	0.15	0.34	1.18	0.012	0.004	0.20	0.02	0.11	0.13	0.004
189862	85515B 165 407923S	0.15	0.35	1.21	0.013	0.005	0.20	0.02	0.11	0.14	0.004

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 3 / 7 Date: 21.11.2024

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(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min		-	-	-	-	-	-	-	-	-	-
max		0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189863	85514 164 407924T	0.14	0.33	1.22	0.012	0.002	0.22	0.02	0.08	0.12	0.004
189863	85513B 164 407925U	0.14	0.33	1.21	0.012	0.002	0.22	0.02	0.08	0.12	0.004

(B07.1) Heat	(C00.1) Test Piece	Nb(Cb) %	V %	B %	1003 %	2557 %					
min		-	-	-	-	-					
max		0.05	0.07	0.001	0.43	0.25					
189862	81834B 163 407189U	0.01	0.05	0.001	0.42	0.25					
189862	85516 165 407922R	0.01	0.05	0.001	0.41	0.24					
189862	85515B 165 407923S	0.01	0.05	0.001	0.43	0.25					
189863	85514 164 407924T	0.01	0.06	0.001	0.42	0.24					
189863	85513B 164 407925U	0.01	0.06	0.001	0.41	0.24					

1003	CE (IIW) = C + Mn / 6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15
2557	PCM = C + Si / 30 + (Mn + Cu + Cr) / 20 + Nl / 60 + Mo / 15 + V / 10 + 5 * B

(C00.1) Test Piece	
	Sample
	HT lot / Inspection Lot
	Piece

(B04)

HEAT TREATMENT

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 4 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(B04)

HEAT TREATMENT

Heat treatment type	Temperature	Soaking time	Cooling
Quenching	925 °C	10 min	Water
Tempering	650 °C	15 min	Air

TENSILE TEST RESULTS

Type (C10.1)	Round
Test temperature (C03)	Room temperature
Direction (C02)	longitudinal
Location (C01.1)	A end

(B07.1) Heat	(C00.1) Test Piece	(C10.2) Dimension	(C11) YS	(C12) TS	(C13.2) Elong.	(C14.1) Ratio					
		mm / mm2	$R_{t0,5}$ MPa	R_m MPa	2" %	$R_{t0,5}/R_m$ -					
min		-	360	460	25.7	-					
max		-	530	760	-	0.93					
189862	81834B 163 407189U	12.69 126.48	457	584	28.8	0.78					
189862	85515B 165 407923S	12.70 126.68	481	601	27.8	0.80					
189863	85513B 164 407925U	12.69 126.48	472	593	29.8	0.80					

(C00.1)	
Test Piece	Sample HT lot / Inspection Lot Piece
(C10.2)	
Dimension	Test piece dimensions Test piece area

IMPACT TEST RESULTS

Absorbed energy values above 360 J (80% of the scale range of the impact testing machine i.e 450 J) are inaccurate and are reported as approximate

Type (C40)	Charpy V
Test temperature (C03)	0 °C

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 5 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

IMPACT TEST RESULTS

Direction (C02)	transverse
Location (C01.1)	A end

(B07.1) Heat	(C00.1) Test Piece	(C41) Dimension	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.1) Mean					
		mm / cm2	J	J	J	J					
min max		- -	20.0 -	20.0 -	20.0 -	27.0 -					
189862	81834B 163 407189U	10.00x10.00 0.80	201.6	192.7	204.0	199.4					
189862	85515B 165 407923S	10.00x10.00 0.80	200.4	208.1	212.2	206.9					
189863	85513B 164 407925U	10.00x10.00 0.80	327.4	350.2	383.1	353.5					

(C00.1)	
Test Piece	Sample HT lot / Inspection Lot Piece
(C41)	
Dimension	Test piece dimensions Test piece area

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 6 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
UT longitudinal Type and size of reference standard:	Ultrasonic inspection, longitudinal, inside and outside, on each pipe, severity level API 5L, N12.5 acc EN ISO 10893-10 or ASTM E213 , on pipe body, coverage min 100 % (the untested ends shall be cut off or control by UT or controlled by MPI) ; external notch depth : Rectangular notch, 12.5% of specified wall thickness, minimum 0.3mm, notch maximum length 50mm, notch maximum width 1mm#internal notch depth : Rectangular notch, 12.5% of specified wall thickness, minimum 0.3mm, notch maximum length 50mm, notch maximum width 1m m	100% each lot	Satisfactory
UT wall thickness	Ultrasonic wallthickness measurement (specification)	100% each lot	Satisfactory
Hydrostatic test	pression mini 205 BAR temps de maintien 5 secondes - EH avec enregistrement	100% each lot	Satisfactory
Appearance & Dimensions	Aspect & Dimensions (specification)	100% each lot	Satisfactory
Positive Material Identification	Spectrographic Analysis	100% each lot	Satisfactory

PROCESS GUARANTEE

Axial residual magnetic flux density on 1 Piece per 4 hours per operating shift, 4 readings at both ends : average max 30 Gauss, si

(A04, B06)

MARKING, IDENTIFICATION

1	Paint marking at the other end T10	VALLOUREC	LOGO VALLOUREC VALLOUREC API SPEC 5L 5L-0061.3 %%(API MONOGRAM) Month-Year 406.4 36.53 X52Q PSL 2 SMLS Heat numberprocess number le ngth (mm) PFP ® K 278097 1 FRANCE

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03)

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 7 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

Date	Validated by	Signature	Contact details	Stamp
21.11.2024	Inspection Representative	Laurent BELLENGIER	☎ +33 6 71 52 36 12 @ laurent.bellengier@vallourec.com	vallourec VALLOUREC TUBES France Tuberie d'Aulnoye 64 rue de Leval 59620 AULNOYE-AYMERIES
	Third Party Representative	Alexandre VIALLA	☎ @ 7308 9714 / 1180 Au 24	TÜV Rheinland Industrial Services 17932

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 1 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(A01) **Vallourec Tubes France**	(A08.1) **Vallourec-Order-No.** 278097 (A08.2) **Suborder**
(A06.1) **Consignee** ROSETTI MARINO SPA VIA TRIESTE 230 I-48121 RAVENNA	
(A06.2) **Orderer** T.A.L. S.p.A TUBI ACCIAIO LOMBARDA / I-29017 FIORENZUOLA D'ARDA (PC)	(A07.2) **Orderer Order-No.** OF240526 19.07.2024

(B01, B02, B04) **Description of the product**	Hot finished seamless Line pipes API 5L, PSL 2, April 2018 Rev. 46 (E1) API 5L Annex C, E API 5L Annex A, O, API Monogram ASME B36.10:2022 X52Q, API 5L, PSL2 Square cut squareness to the tube axis, max. 1.6 mm End 1: Plain end square cut, deburred End1 protection : Plastic cap, installed on end End 2: Plain end square cut, deburred End2 protection : Plastic cap, installed on end Without inside rust protection Outside with dry varnish Standard mass tolerances: min. -1.75 % for items of at least 18000 kg
(A10) **Inspection by**	TPI
PFP pipes Aulnoye	

(A13) Vallourec Item	(A09) **Orderer Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
1	10		API 5L OD 406.4 x WT 36.53 mm OD Tol ± 0.75 % WT Tol. : from -10 % to 3.7 mm, localised up to 5.5265 mm allowed	Random length from 9000 to 11000 mm Without short length

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 2 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(A13) Vallourec Item	(A09) **Orderer Item**	(B08) Quantity P	(B11) Total length M	(B13) Weight kg
1	10	4	38.891	13 136

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min	-	-	-	-	-	-	-	-	-	-	-
max	-	0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189862	Electric (EAF)	0.15	0.34	1.24	0.011	0.004	0.21	0.02	0.10	0.14	0.003
189863	Electric (EAF)	0.14	0.33	1.26	0.010	0.001	0.23	0.02	0.07	0.13	0.003

(B07.1) Heat	Nb(Cb) %	V %	B %									
min	-	-	-									
max	0.05	0.07	0.001									
189862	0.01	0.06	0.0003									
189863	0.01	0.06	0.0002									

Heats fully killed

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min		-	-	-	-	-	-	-	-	-	-
max		0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189862	81834B 163 407189U	0.15	0.35	1.19	0.012	0.005	0.20	0.02	0.11	0.13	0.004
189862	85516 165 407922R	0.15	0.34	1.18	0.012	0.004	0.20	0.02	0.11	0.13	0.004
189862	85515B 165 407923S	0.15	0.35	1.21	0.013	0.005	0.20	0.02	0.11	0.14	0.004

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 3 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Cr %	Mo %	Ni %	Cu %	Ti %
min		-	-	-	-	-	-	-	-	-	-
max		0.18	0.45	1.50	0.025	0.015	0.30	0.15	0.30	0.50	0.04
189863	85514 164 407924T	0.14	0.33	1.22	0.012	0.002	0.22	0.02	0.08	0.12	0.004
189863	85513B 164 407925U	0.14	0.33	1.21	0.012	0.002	0.22	0.02	0.08	0.12	0.004

(B07.1) Heat	(C00.1) Test Piece	Nb(Cb) %	V %	B %	1003 %	2557 %					
min		-	-	-	-	-					
max		0.05	0.07	0.001	0.43	0.25					
189862	81834B 163 407189U	0.01	0.05	0.001	0.42	0.25					
189862	85516 165 407922R	0.01	0.05	0.001	0.41	0.24					
189862	85515B 165 407923S	0.01	0.05	0.001	0.43	0.25					
189863	85514 164 407924T	0.01	0.06	0.001	0.42	0.24					
189863	85513B 164 407925U	0.01	0.06	0.001	0.41	0.24					

1003	CE (IIW) = C + Mn / 6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15
2557	PCM = C + Si / 30 + (Mn + Cu + Cr) / 20 + NI / 60 + Mo / 15 + V / 10 + 5 * B

(C00.1) Test Piece	
	Sample
	HT lot / Inspection Lot
	Piece

(B04)

HEAT TREATMENT

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01)
TUBERIE AULNOYE
64 RUE DE LEVAL
59620 AULNOYE AYMERIES
FRANCE

vallourec

INSPECTION CERTIFICATE (A02)
3.2 EN 10204:2004

No. : 1180Au24 (A03)
Page: 4 / 7
Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(B04)

HEAT TREATMENT

Heat treatment type	Temperature	Soaking time	Cooling
Quenching	925 °C	10 min	Water
Tempering	650 °C	15 min	Air

TENSILE TEST RESULTS

Type (C10.1)	Round
Test temperature (C03)	Room temperature
Direction (C02)	longitudinal
Location (C01.1)	A end

(B07.1) Heat	(C00.1) Test Piece	(C10.2) Dimension	(C11) YS	(C12) TS	(C13.2) Elong.	(C14.1) Ratio					
		mm / mm2	$R_{t0,5}$ MPa	R_m MPa	2" %	$R_{t0,5}/R_m$ -					
min		-	360	460	25.7	-					
max		-	530	760	-	0.93					
189862	81834B 163 407189U	12.69 126.48	457	584	28.8	0.78					
189862	85515B 165 407923S	12.70 126.68	481	601	27.8	0.80					
189863	85513B 164 407925U	12.69 126.48	472	593	29.8	0.80					

(C00.1)	
Test Piece	Sample
	HT lot / Inspection Lot
	Piece
(C10.2)	
Dimension	Test piece dimensions
	Test piece area

IMPACT TEST RESULTS

Absorbed energy values above 360 J (80% of the scale range of the impact testing machine i.e 450 J) are inaccurate and are reported as approximate

Type (C40)	Charpy V
Test temperature (C03)	0 °C

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 5 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

IMPACT TEST RESULTS

Direction (C02)	transverse
Location (C01.1)	A end

(B07.1) Heat	(C00.1) Test Piece	(C41) Dimension	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.1) Mean					
		mm / cm2	J	J	J	J					
min max		- -	20.0 -	20.0 -	20.0 -	27.0 -					
189862	81834B 163 407189U	10.00x10.00 0.80	201.6	192.7	204.0	199.4					
189862	85515B 165 407923S	10.00x10.00 0.80	200.4	208.1	212.2	206.9					
189863	85513B 164 407925U	10.00x10.00 0.80	327.4	350.2	383.1	353.5					

(C00.1) Test Piece	Sample HT lot / Inspection Lot Piece
(C41) Dimension	Test piece dimensions Test piece area

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 6 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
UT longitudinal Type and size of reference standard:	Ultrasonic inspection, longitudinal, inside and outside, on each pipe, severity level API 5L, N12.5 acc EN ISO 10893-10 or ASTM E213 , on pipe body, coverage min 100 % (the untested ends shall be cut off or control by UT or controlled by MPI) ; external notch depth : Rectangular notch, 12.5% of specified wall thickness, minimum 0.3mm, notch maximum length 50mm, notch maximum width 1mm#internal notch depth : Rectangular notch, 12.5% of specified wall thickness, minimum 0.3mm, notch maximum length 50mm, notch maximum width 1m m	100% each lot	Satisfactory
UT wall thickness	Ultrasonic wallthickness measurement (specification)	100% each lot	Satisfactory
Hydrostatic test	pression mini 205 BAR temps de maintien 5 secondes - EH avec enregistrement	100% each lot	Satisfactory
Appearance & Dimensions	Aspect & Dimensions (specification)	100% each lot	Satisfactory
Positive Material Identification	Spectrographic Analysis	100% each lot	Satisfactory

PROCESS GUARANTEE

Axial residual magnetic flux density on 1 Piece per 4 hours per operating shift, 4 readings at both ends : average max 30 Gauss, si

(A04, B06)

MARKING, IDENTIFICATION

1	Paint marking at the other end T10	VALLOUREC	LOGO VALLOUREC VALLOUREC API SPEC 5L 5L-0061.3 %%(API MONOGRAM) Month-Year 406.4 36.53 X52Q PSL 2 SMLS Heat numberprocess number le ngth (mm) PFP ® K 278097 1 FRANCE

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03)

Approved by QUALITY2 on 03/12/24

Vallourec Tubes France (A01) TUBERIE AULNOYE 64 RUE DE LEVAL 59620 AULNOYE AYMERIES FRANCE	vallourec	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 1180Au24 (A03) Page: 7 / 7 Date: 21.11.2024

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

Date	Validated by	Signature	Contact details	Stamp
21.11.2024	Inspection Representative	Laurent BELLENGIER	☎ +33 6 71 52 36 12 @ laurent.bellengier@vallourec.com	vallourec VALLOUREC TUBES France Tuberie d'Aulnoye 64 rue de Leval 59620 AULNOYE-AYMERIES
	Third Party Representative	Alexandre MACCIA	☎ @ 7308 9714 / 1180 Au 24	TÜV Rheinland Industrial Services 87932

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

Approved by QUALITY2 on 03/12/24

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA SRL	1724001529	123A90A	Q012400707

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **02.09.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

343-24

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753300 CE 09-0099 AMBE-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA BER 672174

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
06-E-74162	6/5/24	4500767053	3/5/24	20/6/24

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL BERGARA
C/IBARRA, 6
20570 BERGARA (Gipuzkoa)
TELEF. (943) 76.19.40 - FAX (943) 765243

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
ARCELORMITTAL DISTRIBUTION VIALE BRENTA 27/29 20139 MILANO ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**ARCELORMITTAL DISTRIBUTION** VIA CASELLE, 57 25020 FLERO ITALIA CAMIÓN EN:FLERO (BRESCIA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	311	312	310	606	314
69759382103202	IPE 220	18,1 m.	10	5529689	4.684
69759382103767	IPE 220	18,1 m.	10	5529689	4.684
69759382103790	IPE 220	18,1 m.	10	5529689	4.684
69759382104083	IPE 220	18,1 m.	10	5529689	4.684
69759382104098	IPE 220	18,1 m.	10	5529689	4.684

5 paquetes **50 barras** **23.420 Kg**

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000 98244 DEL 21/6/24
KG. 2371
ArcelorMittal Distribution Solutions Italia S.r.l.

TRANSPORTISTA
IRURZUN ZUBELDIA, MIGUEL CASA MARTIN- ENEA 31891 AZKARATE NAVARRA N.I.F. 15946319M

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.600	37.020	23.420

VEHICULO / REMOLQUE	POR EXPEDICIONES
4138JXK / R9704BBH	
MIGUEL IRURZUN ZUBELDIA	7:26
D.N.I. 15946319M	8:14

Bergara, jueves, 20 de junio de 2024

1763/ 3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753300 CE 09-0099 AMBE-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA BER 672174

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
06-E-74162	6/5/24	4500767053	3/5/24	20/6/24

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL BERGARA
C/IBARRA, 6
20570 BERGARA (Gipuzkoa)
TELEF. (943) 76.19.40 - FAX (943) 765243

A05.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
ARCELORMITTAL DISTRIBUTION VIALE BRENTA 27/29 20139 MILANO ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	ARCELORMITTAL DISTRIBUTION VIA CASELLE, 57 25020 FLERO ITALIA CAMIÓN EN:FLERO (BRESCIA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 BER672174

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb					Cev
B11	B08	C11	C12	C13	C14	C15	C16	C17	C18									
IPE-220	5529689	,07	,88	,21	,021	,022	,012	,006	,138	,422	,146	,034	,028					,29

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180°	°C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C104/1	C42			C43
IPE-220	5529689	402	504	32,5		-20°	7,5	121	158	118	132

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMB
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
IRURZUN ZUBELDIA, MIGUEL CASA MARTIN- ENEA 31891 AZKARATE NAVARRA N.I.F. 15946319M

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.600	37.020	23.420

VEHICULO / REMOLQUE	POR EXPEDICIONES
4138JXK / R9704BBH	
MIGUEL IRURZUN ZUBELDIA	7:26
D.N.I. 15946319M	8:14

Bergara, jueves, 20 de junio de 2024

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753300 CE 09-0099 AMBE-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA BER 672174

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
06-E-74162	6/5/24	4500767053	3/5/24	20/6/24

ALMACÉN DE CARGA / CERTIFICADO POR
ARCELORMITTAL BERGARA C/IBARRA, 6 20570 BERGARA (Gipuzkoa) TELEF. (943) 76.19.40 - FAX (943) 765243

A06 1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
ARCELORMITTAL DISTRIBUTION VIALE BRENTA 27/29 20139 MILANO ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**ARCELORMITTAL DISTRIBUTION** VIA CASELLE, 57 25020 FLERO ITALIA CAMIÓN EN:FLERO (BRESCIA)

OBSERVACIONES
CONTACT: Mr. Marnissi Omar T + 39 030 26 40 571 | M + 39 349 32 73 937 omar.marnissi@arcelormittal.com Ref: 1100699581

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA
IRURZUN ZUBELDIA, MIGUEL CASA MARTIN- ENEA 31891 AZKARATE NAVARRA N.I.F. 15946319M

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.600	37.020	23.420

VEHICULO / REMOLQUE	POR EXPEDICIONES
4138JXK / R9704BBH	
MIGUEL IRURZUN ZUBELDIA	7:26
D.N.I. 15946319M	8:14

Bergara, jueves, 20 de junio de 2024

DICHIARAZIONE DI PRESTAZIONE

Declaration of Performance

ArcelorMittal

NR. 26027

Fabbricante: **ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA**
VIA CASELLE, 57 - 25020 FLERO

1. Prodotto: **TRAVI E/O ANGOLARI IN ACCIAIO PER USO STRUTTURALE**

2. RIFERIMENTO CLIENTE: ROSETTI MARINO S.P.A.

ORDINE: 1724001529 **DDT** 800098242

Il prodotto deve essere utlizzato conformemente alla specifica tecnica armonizzata UNI EN 1090-1:2009 + A1:2011 e UNI EN 1090-2

Sistema di valutazione della prestazione del prodotto di cui all allegato V del regolamento UE305/2011:2+

L'organismo DNV GL Business Assurance Italia S.r.l. - n0496 ha rilasciato il CERTIFICATO DI CONFORMITA' DEL CONTROLLO DELLA PRODUZIONE IN FABBRICA N°0496-CPR-0050 in accordo al Regolamento Prodotti da Costruzione
E305/2011CE

CE 16

3. Prestazione dichiarata metodo 1, 3A

Caratteristiche essenziali (cfr nota 1) Prestazione (cfr nota 2) Specifica tecnica armonizzata (cfr nota3)

Caratteristiche essenziali	Prestazione	Specifica tecnica armonizzata
Tolleranze sui dati geometrici	***EN 1090-2***	*EN 1090-1*
Saldabilità	***S355 J2+M secondo la norma EN 10025-2***	*EN 1090-1 e EN 10025-1*
Resistenza alla rottura	***27 Joule a - 20°C***	*EN 1090-1 e EN 10025-1*
Reazione al fuoco	***Materiale classificato Classe A1***	*EN 1090-1*
Rilascio di cadmio	***NPD***	*EN 1090-1*
Emissione di radioattività	***NPD***	*EN 1090-1*
Durabilità	***NPD***	*EN 1090-1*
Capacità di supporto del carico	***NPD***	*EN 1090-1*
Resistenza a fatica	***NPD***	*EN 1090-1*
Resistenza al fuoco	***NPD***	*EN 1090-1*
Caratteristiche strutturali	***Fornito dall'acquirente Dis.***	*EN 1090-1*
Fabbricazione	***Secondo la specifica del Cliente*** 1724001529 ***e la EN 1090-2, EXC*** 2 .	*EN 1090-1*

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alle prestazioni dichiarate di cui al punto 3. Si rilascia la presente dichiarazione di Prestazione sotto la responsabilità esclusiva del fabbricante.

Flero, 2 agosto 2024

Il Legale Rappresentante
Vincio Stefano

1766/ 3402

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753300 09-0099 AMBE-2/09-CPR-13-1 EN 10025-1:2004

DATE: **02/08/2024**

web: www.ris.arcelormittal.net

PRODUCTS					
S 355 J2+M - EN 10025-2/2019					
BUNDLE	SIZE	LENGTH	BARS	HEAT	WEIGHT (Kg)
	B11	B12	B10 :	B09	REF.
69769098292733	**IPE-160**	**15,1**	**14**	**5523446**	**3.340**

WEIGHT: **3.340 Kg.**

A02 EN 10204/3.1 **CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE** A03 BER0

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

C70:E MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb					Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78									
IPE-160	5523446	,07	,97	,18	,021	,011	,009	,004	,170	,420	,240	,032	,027					,32

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-160	5523446	374	498	36,6		-20º	5	88	84	95	89

Head of Quality Department Z01

We hereby certify that the steels listed above has been successfully tested in accordance with the specification.

Jose Maria Galindo

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000098242 DEL 21/8/24
KG. 2326
ArcelorMittal Distribution Solutions Italia S.r.l.

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A08 Our reference : 1100699584

A07 Your reference : 4500767056
03.05.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal

A05
Mill Test Certificate Nr X 5131523
Delivery note number 5131523 from 10 June 2024 A03

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000010	HE 220 B	22.100 mm	37,248 to	# 82244	9,312 to		6
				# 82245	27,936 to		18

B07 Heat nr	Heat analysis (%)																
	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					**0,14**												**0,020**
Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**	**100,0**
82244	0,06	1,45	0,022	0,020	0,16	0,009	0,002	0,31	0,13	0,11	0,007	0,039	0,040	0,019	0,0004	0,36	0,028
82245	0,09	1,45	0,029	0,018	0,17	0,010	0,002	0,36	0,13	0,12	0,007	0,041	0,030	0,022	0,0004	0,40	0,030

B07 Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV			UNAGED		J		
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	**355**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
82244	475	580	27,92	FL.1/3	L		-20	246	228	213	229
82244	476	583	24,16	FL.1/3	L		-20	181	239	255	225
82245	509	618	28,02	FL.1/3	L		-20	181	170	195	182

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000098262 DEL 21/12/24
KG. 1508
ArcelorMittal Distribution Solutions Italia S.r.l.

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate NrX 5131523

Delivery note number 5131523 from 10 June 2024 A03

A08 Our reference : 1100699584
A07 Your reference : 4500767056
03.05.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04 CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

769234022

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA SRL	1724001529	123A90A	Q012400708

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

02.09.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753300 09-0099 AMBE-2/09-CPR-13-1 EN 10025-1:2004

DATE: **10/07/2024**

web: www.ris.arcelormittal.net

PRODUCTS					
S 355 J2+M - EN 10025-2/2019					
BUNDLE	SIZE	LENGTH	BARS	HEAT	WEIGHT (Kg)
	B11	B12	B10	B08	REF.
69759379208375	**HEA-120**	**12,1**	**20**	**5529832**	**4.816**

WEIGHT: **4.816 Kg.**

A02 EN 10204/3.1 **CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE** A03 BER1869091

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
HEA-120	5529832	,07	,93	,21	,021	,030	,012	,005	,106	,398	,166	,037	,027						,30

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180°	°C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41		C42		C43
HEA-120	5529832	392	487	30,8		-20°	5	112	72	81	88

Head of Quality Department Z01

We hereby certify that the steels listed above has been successfully tested in accordance with the specification.

Jose Maria Galindo

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 80009746 DEL 21/8/24
KG. 1269
ArcelorMittal Distribution Solutions Italia S.r.l.

ArcelorMittal Hunedoara S.A.
Soseaua Hunedoara – Santuhalm, nr. 4, Cod 331111, Hunedoara-Romania

ArcelorMittal

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
ARCELORMITTAL DISTRIBUTION

Nr. / No.: 1450093503
Data / Date: 10.05.2024

Adresa/Address: VIA CASELE 57, , 25020, FLERO (BS)
Tara/State: Italy

Comanda nr. / Order no.: 4500764638
Comanda data / Order date: 24.04.2024

Vagon/Wagon / Auto/Truck:
AB69FEN/AB21PRY

Prebon nr. / Prebon no.: 1100698862

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH [N/mm^2]	Rm [N/mm^2]	A5 [%]	Incovoiere prin soc / Charpy impact test					
											Tip epruveta / Type of sample	Temp [^oC]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	73683	S355J2+M	HE160B	42	21.820	12100	-0 / +100	395	517	29,0	300/10	-20	116,0	112,0	122,0	116,7

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73683	0,120	1,150	0,220	0,004	0,014	0,070	0,090	0,290	0,020	0,001	0,040	0,020	0,015	0,0004	0,0011	0,0093			0,363

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. ..... DEL .....
KG. 2572
ArcelorMittal Distribution Solutions Italia S.r.l.

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
CRISTIAN IOAN MICLEAN CIAPA

CE
12/1823

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 5131521
Delivery note number 5131521 from 10 June 2024 A03

A08 Our reference : 1100698873
A07 Your reference : 4500764577
24.04.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000015	HE 220 B	18.100 mm	30,624 to	82245	30,624 to		24

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,110			0,45	100,0
82245	0,09	1,45	0,029	0,018	0,17	0,010	0,002	0,36	0,13	0,12	0,007	0,041	0,030	0,022	0,0004	0,40	0,030

Heat nr B07	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
Min	355	470	22,00	FL.1/3	L		-20		19		27
Max		630									
82245	510	628	26,58	FL.1/3	L		-20	172	178	163	171

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. ..... DEL .....
KG. .....
ArcelorMittal Distribution Solutions Italia S.r.l.

Dal Magro Damien
Porteur de signature spéciale
Z03

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. ..... DEL .....
KG. 12522
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate Nr X 5131521

Delivery note number 5131521 from 10 June 2024 A03

A08 Our reference : 1100698873
A07 Your reference : 4500764577
24.04.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal
A05

Mill Test Certificate NrX 5131524

Delivery note number 5131524 from 10 June 2024 A03

A08 Our reference : 1100698873
A07 Your reference : 4500764577
24.04.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000014	HE 220 B	15.100 mm	28,833 to	82243	20,595 to		20
				82244	8,238 to		8

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					**0,14**												**0,020**
	Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**	**100,0**
82243		0,07	1,44	0,025	0,022	0,19	0,011	0,002	0,30	0,14	0,10	0,006	0,037	0,040	0,021	0,0003	0,37	0,028
82244		0,06	1,45	0,022	0,020	0,16	0,009	0,002	0,31	0,13	0,11	0,007	0,039	0,040	0,019	0,0004	0,36	0,028

Heat nr		Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	Charpy impact test C40 KV Position		mm	UNAGED °C	J 1	2	3	M
B07		C11	C12	C13	C01	C02	C41	C03	C42			C43
	Min	**355**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
	Max		**630**									
82243		485	594	25,75	FL.1/3	L		-20	201	150	203	185
82243		496	612	27,23	FL.1/3	L		-20	200	224	179	201
82244		476	583	24,16	FL.1/3	L		-20	181	239	255	225

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 80097496 DEL 21/8/24
KG. 8292
ArcelorMittal Distribution Solutions Italia S.r.l.

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate Nr X 5131524

Delivery note number 5131524 from 10 June 2024 A03

A08 Our reference : 1100698873

A07 Your reference : 4500764577
24.04.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 5131523
Delivery note number 5131523 from 10 June 2024 A03

A08 Our reference : 1100699584
A07 Your reference : 4500767056
03.05.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000010	HE 220 B	22.100 mm	37,248 to	82244	9,312 to		6
				82245	27,936 to		18

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					**0,14**												**0,020**
	Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**	**100,0**
82244		0,06	1,45	0,022	0,020	0,16	0,009	0,002	0,31	0,13	0,11	0,007	0,039	0,040	0,019	0,0004	0,36	0,028
82245		0,09	1,45	0,029	0,018	0,17	0,010	0,002	0,36	0,13	0,12	0,007	0,041	0,030	0,022	0,0004	0,40	0,030

Heat nr	Tensile test			Charpy impact test						
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J		
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	**355**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
82244	475	580	27,92	FL.1/3	L		-20	246	228	213	229
82244	476	583	24,16	FL.1/3	L		-20	181	239	255	225
82245	509	618	28,02	FL.1/3	L		-20	181	170	195	182

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 80097496 DEL 21/8/24
KG. 9297
ArcelorMittal Distribution Solutions Italia S.r.l.

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 08
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 5131523

Delivery note number 5131523 from 10 June 2024 A03

A08 Our reference : 1100699584

A07 Your reference : 4500767056
03.05.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

DICHIARAZIONE DI PRESTAZIONE

Declaration of Performance

ArcelorMittal

NR. 26026

Fabbricante: **ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA**
VIA CASELLE, 57 - 25020 FLERO

1. Prodotto: **TRAVI E/O ANGOLARI IN ACCIAIO PER USO STRUTTURALE**

2. RIFERIMENTO CLIENTE: ROSETTI MARINO S.P.A.

ORDINE: 1724001529 **DDT** 800097496

Il prodotto deve essere utlizzato conformemente alla specifica tecnica armonizzata UNI EN 1090-1:2009 + A1:2011 e UNI EN 1090-2

Sistema di valutazione della prestazione del prodotto di cui all allegato V del regolamento UE305/2011:2+

L'organismo DNV GL Business Assurance Italia S.r.l. - n0496 ha rilasciato il CERTIFICATO DI CONFORMITA' DEL CONTROLLO DELLA PRODUZIONE IN FABBRICA N°0496-CPR-0050 in accordo al Regolamento Prodotti da Costruzione E305/2011CE

CE 16

3. Prestazione dichiarata metodo 1, 3A

Caratteristiche essenziali (cfr nota 1) Prestazione (cfr nota 2) Specifica tecnica armonizzata (cfr nota3)

Caratteristiche essenziali	Prestazione	Specifica tecnica armonizzata
Tolleranze sui dati geometrici	***EN 1090-2***	*EN 1090-1*
Saldabilità	***S355 J2+M secondo la norma EN 10025-2***	*EN 1090-1 e EN 10025-1*
Resistenza alla rottura	***27 Joule a - 20°C***	*EN 1090-1 e EN 10025-1*
Reazione al fuoco	***Materiale classificato Classe A1***	*EN 1090-1*
Rilascio di cadmio	***NPD***	*EN 1090-1*
Emissione di radioattività	***NPD***	*EN 1090-1*
Durabilità	***NPD***	*EN 1090-1*
Capacità di supporto del carico	***NPD***	*EN 1090-1*
Resistenza a fatica	***NPD***	*EN 1090-1*
Resistenza al fuoco	***NPD***	*EN 1090-1*
Caratteristiche strutturali	***Fornito dall'acquirente Dis.***	*EN 1090-1*
Fabbricazione	***Secondo la specifica del Cliente***	*EN 1090-1*
	1724001529	
	e la EN 1090-2, EXC 2 .	

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alle prestazioni dichiarate di cui al punto 3. Si rilascia la presente dichiarazione di Prestazione sotto la responsabilità esclusiva del fabbricante.

Flero, 2 agosto 2024

Il Legale Rappresentante
Vincio Stefano

1779/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Metalsider S.p.A.	1724001563	122A70C	Q012400754

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani 13/09/2024

Sonia Emiliani

☒ REVIEW

☐ WITNESS

CUSTOMER

NOTE

CE

Cert no. 0045-CPR-1090
09

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123
Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To.
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

TC No 2023-24/0402224701/2603
Date 27.03.2024

						Chemical Analysis & Mechanical Properties																				
						C %	Mn %	S %	P %	Si %	Al %	Cr %	Ni %	Cu %	Nb %	Mo %	V %	Ti %	B %	Ca %	N %	CE Lng %	YS MPa	UTS MPa	
Specification : EN 10025_2_2019 Grade : S355J2_N_CL1			MIN MAX	--------> -------->		- 0.2000	- 1.600	- 0.0250	- 0.025	- 0.030	0.0200 -	- -	- -	- 0.550	- -	- -	- -	- -	- -	- -	- 0.0120	- 0.459	355 -	470 630	
Cast/Heat No.	Coil No.	T X W X L (mm)	Net Wt.	Gross Wt.	Coils	C %	Mn %	S %	P %	Si %	Al %	Cr %	Ni %	Cu %	Nb %	Mo %	V %	Ti %	B %	Cu %	N %	CE Lng %	YS MPa	UTS MPa	Remarks
F956857	24534228	10.000 X 2000.0 X Coil	29.210	29.220	1	0.160	1.390	0.007	0.018	0.016	0.038	0.014	0.009	0.006	0.013	0.001	0.041	0.027	0.000	0.004	0.0055	0.404	469	600	
113550 D956878	24534229	10.000 X 2000.0 X Coil	27.345	27.355	1	0.170	1.340	0.006	0.018	0.015	0.045	0.015	0.009	0.008	0.010	0.001	0.037	0.034	0.000	0.002	0.0058	0.405	486	615	
F956857	24534230	10.000 X 2000.0 X Coil	29.320	29.330	1	0.160	1.390	0.007	0.018	0.016	0.038	0.014	0.009	0.006	0.013	0.001	0.041	0.027	0.000	0.004	0.0055	0.404	469	600	
F956869	24534231	10.000 X 2000.0 X Coil	29.215	29.225	1	0.163	1.320	0.006	0.015	0.025	0.045	0.016	0.008	0.005	0.011	0.001	0.039	0.033	0.000	0.002	0.0052	0.395	502	619	
Sub Total Weight in Metric Tonnes			115.090	115.130																				
Sub Total No. of Coils			4																					

DDT N°5347 del 11/09/2024
NS.RIF. N°113550 X Kg. 6470
VS.ORD. N°1724001563 del 31/07/2024

METALSIDER S.p.A.
Controllo qualità
per copia conforme

1781/ 3402

CE

Cert no. 0045-CPR-1090 09

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123

Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To,
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

TC No 2023-24/0402224701/2603
Date 27.03.2024

						Chemical Analysis & Mechanical Properties												
						EL %	GL mm	Ten Dir	Bnd Rad	Bnd Res	Bnd Dir	IT 1 Joule	IT 2 Joule	IT 3 Joule	IT Avg Joule	IT Dir	IT Temp °C	
Specification : EN 10025_2_2019 Grade : S355J2_N_CLI			MIN / MAX	--------> / -------->		20.00 -	-	-	2T -	-	-	-	-	-	-	-	-	
Cast/Heat No.	Coil No.	T X W X L (mm)	Net Wt.	Gross Wt.	NP	EL %	GL mm	Ten Dir	Bnd Rad	Bnd Res	Bnd Dir	IT 1 Joule	IT 2 Joule	IT 3 Joule	IT Avg Joule	IT Dir	IT Temp °C	Remarks
F956857	24534228	10.000 X 2000.0 X Coil	29.210	29.220	1	26.00	5.65_SA	T	2T	Pass	T	125	127	129	127	L	-20	
D956878	24534229	10.000 X 2000.0 X Coil	27.345	27.355	1	33.00	5.65_SA	T	2T	Pass	T	127	92	109	109	L	-20	
F956857	24534230	10.000 X 2000.0 X Coil	29.320	29.330	1	26.00	5.65_SA	T	2T	Pass	T	125	127	129	127	L	-20	
F956869	24534231	10.000 X 2000.0 X Coil	29.215	29.225	1	31.00	5.65_SA	T	2T	Pass	T	105	103	137	115	L	-20	
Sub Total Weight in Metric Tonnes			115.090	115.130														
Sub Total No. of Coils			4															
Grand Total Weight in Metric Tonnes			2105.600	2106.350														
Grand Total No. of Coils			75															

METALSIDER S.p.A.
Controllo qualità
per copia conforme

1782/ 3402

CE

Cert no. 0045-CPR-1090
00

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123
Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To,
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

TC No 2023-24/0402224701/2603
Date 27.03.2024

METALSIDER S.p.A.
Controllo qualità
per copia conforme

We hereby certify that the material described herein have been tested and inspected with satisfactory results in accordance with the requirements of the above specification.

This is to certify that the above mentioned product produced & supplied by JSW Steel Ltd do not contain any radio active element higher than the natural level. The product or packing material does not contain any hazardous substances as per ROHS. This material does not contain Pb, W, Zr & Co above the limit of Alloy Steel as per Chapter-72.

Commercial Invoice : 7020014954 Sales Contract Number : 2603 Product Description: : HOT ROLLED STEEL COILS,UNPICKLED,UNOILED,MILL EDGE,UNSKINPASSED Process Route :	legend: BOF = Basic Oxygen Furnace, LHF = Ladle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser HSM = Hot Strip Mill, HRS = HR Slitters, CTL = Cut to Length NP = No of Pes/Coils DOP No: JSWHR_09 Spangle : Oil Type : Passivation : Finish :	T x W x L = Thickness x Width x Length, Chemistry = Ladle Sample Analysis, 1MPa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, EL = %ge Elongation on Standard Gauge Length CE =[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Direction L = Longitudinal, T = Transverse Spangle : Oil Type : Passivation : Finish :

Certified By

(Mill)

JSW STEEL LIMITED JSW INDIA

1783/ 3402

JSW STEEL LTD

DECLARATION OF PERFORMANCE

(According to EU-REGULATION 305/2011, ANNEX III)

1. Identification Type (Code): **S235 JR (1.0038)/ J0 (1.0114)/ J2 (1.0117)**
S275 JR (1.0044)/ J0 (1.0143)/ J2 (1.0145)
S355 JR (1.0045)/ J0 (1.0553)/ J2 (1.0577)/ K2 (1.0596)

2. Product type: **Hot Rolled structural steels (Strip/CTL) as per EN 10025 -2: 2004**

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

To be used in Welded, bolted and riveted structures

4. Name and contact address of the manufacturer:

JSW STEEL LTD
JSW CENTRE, BANDRA KURLA COMPLEX, BANDRA (EAST)
MUMBAI - 400051, INDIA
Ph: +91 22 42861000
FAX: +91 22 4286 3000
www.jsw.in

5. Name and contact address of the authorized representative: **Not Applicable**

6. System or systems of assessment and verification of constancy of performance of the construction product: **SYSTEM 2+**

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified factory production control certification body performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity NO.0045-CPD-1090 of the factory production control in accordance with Annex ZA of EN 10025-1:2004

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

Certification Body for Construction Products for Metal Structures

TÜV NORD Systems GmbH & Co. KG
Große Bahnstraße 31
D-22525 Hamburg
Germany
Tel. +49-(0) 40-8557-2368
Fax +49-(0) 40-8557-2710
e-mail hhesse@tuev-nord.de

9. Declared performance

Essential Characteristics	Performance								Harmonised technical Specification
Tolerance on dimension	Nominal Thickness (t) mm				EN10051				EN 10025-1: 2004
Yield Strength ReH (Mpa)	Type and Grade	Nominal thickness (mm)							
		t ≤ 16			16 < t ≤ 40				
	S235JR/J0/J2	235min			225min				
	S275JR/J0/J2	275min			265min				
	S355JR/J0/J2/K2	355min			345min				
Tensile Strength Rm (Mpa)	Type and Grade	Nominal thickness (mm)							
		t < 3			3 ≤ t ≤ 100				
	S235JR/J0/J2	360 to 510			360 to 510				
	S275JR/J0/J2	430 to 580			410 to 560				
	S355JR/J0/J2/K2	510 to 680			470 to 630				
Elongation (Transverse) % GL: 80mm for t < 3.0mm 5.65Sqrt A for t ≥ 3.0mm	Type and Grade	Nominal thickness (mm)							
		1.5 < t ≤ 2		2 < t ≤ 2.5		2.5 < t < 3		3 ≤ t ≤ 40	
	S235JR/J0/J2	17		18		19		24	
	S275JR/J0/J2	15		16		17		21	
	S355JR/J0/J2/K2	14		15		16		20	
Impact Test (J)	Type and Grade	Temperature (^{0}C)			Nominal thickness (mm) t ≤ 150				
	S235/S275/S355JR	20			27				
	S235/S275/S355J0	0			27				
	S235/S275/S355J2	-20			27				
	S355K2	-20			40				
Weldability (CEV)	Type and Grade	CEV (% max) t ≤ 30							
	S235JR/J0/J2	0.35							
	S275JR/J0/J2	0.40							
	S355JR/J0/J2/K2	0.45							
Durability (Chemical Composition for t ≤ 30mm)	Type and Grade	C % max	Si % max	Mn % max	P % max	S % max	N % max	Cu % max	
	S235JR	0.17	-	1.40	0.035	0.035	0.012	0.55	
	S235J0	0.17	-	1.40	0.030	0.030	0.012	0.55	
	S235J2	0.17	-	1.40	0.025	0.025	-	0.55	
	S275JR	0.21	-	1.50	0.035	0.035	0.012	0.55	
	S275J0	0.18	-	1.50	0.030	0.030	0.012	0.55	
	S275J2	0.18	-	1.50	0.025	0.025	-	0.55	
	S355JR	0.24	0.55	1.60	0.035	0.035	0.012	0.55	
	S355J0	0.20	0.55	1.60	0.030	0.030	0.012	0.55	
	S355J2/K2	0.20	0.55	1.60	0.025	0.025	-	0.55	

10. The performance of the product identified in points 1 and 2 is in conformity with the declared point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Devasish Mishra
(AVP- Product Design and Quality Control)
Vidyanagar 01 July 2013.

JSW Steel Limited
Works Vidyanagar, Bellary Dt.

1785/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Metalsider S.p.A.	1724001563	122A70C	Q012400755

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.
TMUGF Firma / MTSMD Signature: Sonia Emiliani
Data / Date: 13/09/2024
Sonia Emiliani
☒ REVIEW
☐ WITNESS

CUSTOMER

NOTE

CE

Cert no. 0045-CPR-1090
09

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123
Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To,
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

DDT N°5318 del 10/09/2024
NS.RIF. N°113543 X Kg. 27440
VS.ORD. N°1724001563 del 31/07/2024

TC No 2023-24/0402224701/2603
Date 27.03.2024

					Chemical Analysis & Mechanical Properties																			
					C %	Mn %	S %	P %	Si %	Al %	Cr %	Ni %	Cu %	Nb %	Mo %	V %	Ti %	B %	Ca %	N %	CE Lng %	YS MPa	UTS MPa	
Specification : EN 10025_2_2019 Grade : S355J2_N_CL1			MIN ---------- MAX	--------> -------->																			
					- 0.2000	- 1.600	- 0.0250	- 0.025	- 0.030	0.0200 -	- -	- -	- 0.550	- -	- -	- -	- -	- -	- -	- 0.0120	- 0.459	355 -	470 630	
Cast/Heat No.	Coil No.	T X W X L (mm)	Net Wt.	Gross Wt.	Coils	C %	Mn %	S %	P %	Si %	Al %	Cr %	Ni %	Cu %	Nb %	Mo %	V %	Ti %	B %	Ca %	N %	CE Lng %	YS MPa	UTS MPa	Remarks
D956869	24534232	8.000 X 2000.0 X Coil	29.190	29.200	1	0.163	1.320	0.006	0.015	0.025	0.045	0.016	0.008	0.005	0.011	0.001	0.039	0.033	0.000	0.002	0.0052	0.395	510	626	
D956874	24534233	8.000 X 2000.0 X Coil	29.240	29.250	1	0.163	1.310	0.007	0.017	0.011	0.045	0.016	0.009	0.008	0.009	0.001	0.038	0.035	0.000	0.003	0.0054	0.393	541	625	
D956874	24534234	8.000 X 2000.0 X Coil	29.300	29.310	1	0.163	1.310	0.007	0.017	0.011	0.045	0.016	0.009	0.008	0.009	0.001	0.038	0.035	0.000	0.003	0.0054	0.393	541	625	113543
F956869	24534686	8.000 X 2000.0 X Coil	29.070	29.080	1	0.163	1.320	0.006	0.015	0.025	0.045	0.016	0.008	0.005	0.011	0.001	0.039	0.033	0.000	0.002	0.0052	0.395	516	617	
Sub Total Weight in Metric Tonnes			116.800	116.840																				
Sub Total No. of Coils			4																					

METALSIDER S.p.A.
Controllo qualità
per copia conforme

1787/ 3402

CE

Cert no. 0045-CPR-1090 09

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123

Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To,
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

TC No 2023-24/0402224701/2603
Date 27.03.2024

We hereby certify that the material described herein have been tested and inspected with satisfactory results in accordance with the requirements of the above specification.

This is to certify that the above mentioned product produced & supplied by JSW Steel Ltd do not contain any radio active element higher than the natural level. The product or packing material does not contain any hazardous substances as per ROHS. This material does not contain Pb, W, Zr & Co above the limit of Alloy Steel as per Chapter-72.

Certified By

(Mill)

Commercial Invoice : 7020014954 Sales Contract Number : 2603 Product Description: : HOT ROLLED STEEL COILS,UNPICKLED,UNOILED,MILL EDGE,UNSKINPASSED Process Route :	legend: BOF = Basic Oxygen Furnace, LHF = Ladle Heating Furnace, CCM = Continuous Casting Machine, RH = RH Degasser HSM = Hot Strip Mill, HRS = HR Slitters, CTL = Cut to Length NP = No of Pcs/Coils DOP No: JSWHR_09 Spangle : Oil Type : Passivation : Finish :	T x W x L = Thickness x Width x Length, Chemistry = Ladle Sample Analysis, 1MPa = 1N/mm2, YS = Yield Strength, UTS = Ultimate Tensile Strength, EL = %ge Elongation on Standard Gauge Length CE =[C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15], Direction L = Longitudinal, T = Transverse Spangle : Oil Type : Passivation : Finish :	

1788/ 3402

CE

Ced no. 0045-CPR-1090
09

JSW STEEL LIMITED

Tornagallu, Taluka Sandur, District Bellary, Karnataka, India - 583123
Regd. Office: JSW Centre, Bandra Kurla Complex, Bandra East, Mumbai, Maharstra, India-400051.

Year of CE mark affixing: 2008-09
Regulated Substance: NPD
D.O.P can be viewed at
http:/www.jsw.in/shop/hot-rolled

MILL TEST CERTIFICATE (According to EN 10204-3.1)

Issued To,
METALSIDER SPA
VIA PIOMBONI 3, 48122 RAVENNA IT

Consignee
TO THE ORDER OF METALSIDER S.P.A.
VIA PIOMBONI 3, 48122 RAVENNA
(ITALY)

TC No 2023-24/0402224701/2603
Date 27.03.2024

						Chemical Analysis & Mechanical Properties												
						El. %	GL mm	Ten Dir	Bnd Rad	Bnd Res	Bnd Dir	IT 1 Joule	IT 2 Joule	IT 3 Joule	IT Avg Joule	IT Dir	IT Temp °C	
Specification : EN 10025_2_2019 Grade : S355J2_N_CL1			MIN MAX	------->>>>>>>		20.00 -	-	-	2T -	-	-	-	-	-	-	-	-	
Cast/Heat No.	Coil No.	T X W X L (mm)	Net Wt.	Gross Wt.	NP	El. %	GL mm	Ten Dir	Bnd Rad	Bnd Res	Bnd Dir	IT 1 Joule	IT 2 Joule	IT 3 Joule	IT Avg Joule	IT Dir	IT Temp °C	Remarks
F956869	24534232	8.000 X 2000.0 X Coil	29.190	29.200	1	24.00	5.65 SA	T	2T	Pass	T	125	123	122	123	L	-20	
D956874	24534233	8.000 X 2000.0 X Coil	29.240	29.250	1	23.00	5.65 SA	T	2T	Pass	T	75	69	72	72	L	-20	
D956874	24534234	8.000 X 2000.0 X Coil	29.300	29.310	1	23.00	5.65 SA	T	2T	Pass	T	75	69	72	72	L	-20	
F956869	24534686	8.000 X 2000.0 X Coil	29.070	29.080	1	24.00	5.65 SA	T	2T	Pass	T	89	95	92	92	L	-20	
Sub Total Weight in Metric Tonnes			116.800	116.840														
Sub Total No. of Coils			4															

METALSIDER S.p.A.
Controllo qualità
per copia conforme

1789/ 3402

JSW STEEL LTD

DECLARATION OF PERFORMANCE

(According to EU-REGULATION 305/2011, ANNEX III)

1. Identification Type (Code): **S235 JR (1.0038)/ J0 (1.0114)/ J2 (1.0117)**
S275 JR (1.0044)/ J0 (1.0143)/ J2 (1.0145)
S355 JR (1.0045)/ J0 (1.0553)/ J2 (1.0577)/ K2 (1.0596)

2. Product type: **Hot Rolled structural steels (Strip/CTL) as per EN 10025 -2: 2004**

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

To be used in Welded, bolted and riveted structures

4. Name and contact address of the manufacturer:

JSW STEEL LTD
JSW CENTRE, BANDRA KURLA COMPLEX, BANDRA (EAST)
MUMBAI - 400051, INDIA
Ph: +91 22 42861000
FAX: +91 22 4286 3000
www.jsw.in

5. Name and contact address of the authorized representative: **Not Applicable**

6. System or systems of assessment and verification of constancy of performance of the construction product: **SYSTEM 2+**

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:

Notified factory production control certification body performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity NO.0045-CPD-1090 of the factory production control in accordance with Annex ZA of EN 10025-1:2004

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:

Certification Body for Construction Products for Metal Structures

TÜV NORD Systems GmbH & Co. KG
Große Bahnstraße 31
D-22525 Hamburg
Germany
Tel. +49-(0) 40-8557-2368
Fax +49-(0) 40-8557-2710
e-mail hhesse@tuev-nord.de

9. Declared performance

Essential Characteristics	Performance								Harmonised technical Specification
Tolerance on dimension	Nominal Thickness (t) mm				EN10051				EN 10025-1: 2004
Yield Strength ReH (Mpa)	Type and Grade	Nominal thickness (mm)							
		t ≤ 16			16 < t ≤ 40				
	S235JR/J0/J2	235min			225min				
	S275JR/J0/J2	275min			265min				
	S355JR/J0/J2/K2	355min			345min				
Tensile Strength Rm (Mpa)	Type and Grade	Nominal thickness (mm)							
		t < 3			3 ≤ t ≤ 100				
	S235JR/J0/J2	360 to 510			360 to 510				
	S275JR/J0/J2	430 to 580			410 to 560				
	S355JR/J0/J2/K2	510 to 680			470 to 630				
Elongation (Transverse) % GL: 80mm for t < 3.0mm 5.65Sqrt A for t ≥ 3.0mm	Type and Grade	Nominal thickness (mm)							
		1.5 < t ≤ 2		2 < t ≤ 2.5		2.5 < t < 3		3 ≤ t ≤ 40	
	S235JR/J0/J2	17		18		19		24	
	S275JR/J0/J2	15		16		17		21	
	S355JR/J0/J2/K2	14		15		16		20	
Impact Test (J)	Type and Grade	Temperature (^{0}C)		Nominal thickness (mm) t ≤ 150					
	S235/S275/S355JR	20		27					
	S235/S275/S355J0	0		27					
	S235/S275/S355J2	-20		27					
	S355K2	-20		40					
Weldability (CEV)	Type and Grade	CEV (% max) t ≤ 30							
	S235JR/J0/J2	0.35							
	S275JR/J0/J2	0.40							
	S355JR/J0/J2/K2	0.45							
Durability (Chemical Composition for t ≤ 30mm)	Type and Grade	C % max	Si % max	Mn % max	P % max	S % max	N % max	Cu % max	
	S235JR	0.17	-	1.40	0.035	0.035	0.012	0.55	
	S235J0	0.17	-	1.40	0.030	0.030	0.012	0.55	
	S235J2	0.17	-	1.40	0.025	0.025	-	0.55	
	S275JR	0.21	-	1.50	0.035	0.035	0.012	0.55	
	S275J0	0.18	-	1.50	0.030	0.030	0.012	0.55	
	S275J2	0.18	-	1.50	0.025	0.025	-	0.55	
	S355JR	0.24	0.55	1.60	0.035	0.035	0.012	0.55	
	S355J0	0.20	0.55	1.60	0.030	0.030	0.012	0.55	
	S355J2/K2	0.20	0.55	1.60	0.025	0.025	-	0.55	

10. The performance of the product identified in points 1 and 2 is in conformity with the declared point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Devasish Mishra
(AVP- Product Design and Quality Control)
Vidyanagar 01 July 2013.

JSW Steel Limited
Works : Vidyanagar, Bellary Dt.

1791/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FERRARI SRL	1724001716	123A90A	Q012400709

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **05.09.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FERRARI
Via Achille Grandi n. 29 (Zona Bassette) 48123 Ravenna - ITALIA
P.IVA 01134740396 Tel. 0544/608311 - Fax 0544 451801
CF e Iscr.Reg.Impr. 01134740396
Cod.ident. CEE IT 01134740396 M. RA 003417 - R.E.A. RA 122802
CAP. SOC. Euro 46.800,00 www.ferrari-ra.it info@ferrari-ra.it

(A04) MATERIAL TEST CERTIFICATE

- ☐ UNI/EN 10204:2004 2.2 - EN 10168:2004
- ☒ UNI/EN 10204:2004 3.1 - EN 10168:2004
- ☐ UNI/EN 10204:2004 3.2 - EN 10168:2004

Azienda con sistema di gestione certificato da IGQ secondo UNI EN ISO 9001
IGQ system quality certified company according to UNI EN ISO 9001

(A03) Cert.N°: 3.377 Rev.:
Page: 1 of 1
(Z02) Date: 04/09/2024
Ddt N°: AB1 / 2.578

(A06) CUSTOMER / CONSIGNEE:	ROSETTI MARINO S.p.A.	(A08) Job N°:	2.227
(A07) PURCHASE ORDER:	1724001716 123A90A	(B02) Steel Designation:	A/SA350M LF2 Cl1

Item	(B08) Qty	(A09/B01 - B09 - B11) Description Material - Product	(B07) Heat No.	Supplier
10	3,00	FLG LWN 150 RF 1" Id=25,4 L=230 A/SA350 LF2 Cl1	.248307	12246-ACC. VENETE
15	1,00	FLG LWN 150 RF 3" Id=76,2 L=305 A/SA350 LF2 Cl1	.290963	12246-ACC-VENETE
15	1,00	FLG LWN 150 RF 3" Id=76,2 L=305 A/SA350 LF2 Cl1	.456878	12246-ABS
20	1,00	FLG LWN 150 RF 2" Id=50,8 L=230 A/SA350 LF2 Cl1	.295027	12246-ACC.VENETE

CHEMICAL ANALYSIS % (C71 - C92)

(B07) Heat N.	C Mn	Si Cr	Ni Mo	Cu Ca	P S	V Nb	V+Nb Fe	As Sn	Sb Al	Ti W	O_2 H_2	N_2 B	Ceq Ceq(SF)	Co Nb+Ta	Cr+Mo Cr+Mo+N	V+Nb+Ti Cr+Ni+Cu+Mo	J fact. X fact.	(C01)
.248307	0,164	0,185	0,112	0,138	0,0070	0,0040	0,0060	0,0030		0,0150		0,0107	0,38		0,142	0,0210	181	L
	1,020	0,119	0,023		0,0030	0,0020		0,0080	0,0300		0,0001	0,0002	0,33	0,0020	0,153	0,392	0	
.290963	0,179	0,215	0,212	0,145	0,0120	0,0060	0,0190	0,0040		0,0010		0,0053	0,41		0,173	0,0200	234	L
	1,014	0,122	0,051	0,0009	0,0030	0,0130		0,0070	0,0300		0,0002	0,0001	0,35	0,0130	0,178	0,530	15	
.295027	0,186	0,219	0,222	0,151	0,0090	0,0080	0,0240	0,0040		0,0060		0,0055	0,42		0,171	0,0300	185	L
	1,017	0,126	0,045		0,0030	0,0160		0,0060	0,0290		0,0002	0,0001	0,36	0,0160	0,177	0,544	12	
.456878	0,209	0,270	0,100	0,110	0,0050	0,0030	0,0050	0,0060	0,0010	0,0018	0,0007	0,0076	0,40	0,0090	0,200	0,0068	120	L
	0,820	0,170	0,030	0,0011	0,0020	0,0020		0,0060	0,0320		0,0001	0,0001	0,35	0,0020	0,208	0,410	9	

MECHANICAL TESTS (C01 - C69)

(B07) Heat N.	(C01) Location	(C02) Direction	(C10) Shape	(C03) Temp C°	(C11) Yield Stress	(C12) Tensile Strength	(C13) Elongation on 2"	(C14) Reduction of Area	(C30) Test Method	(C31) Hardness		(C01) Location	(C02) Direction	Impact Test (J) (C49)10x10 mm.				(C03) Temp C°	(B05) Heat Treatment
														(C42) Obtained			(C43)Mean		
			mm		N/mm²	N/mm²	%	%											
.248307	T/2	L	8,75x35	20	350,0	491,3	41,0	70,0	HB	155	157	T/2	T	98	102	99	100	-46	N
.290963	T/2	T	12,5x50	20	355,7	513,8	35,2	68,4	HB	145	147	T/2	T	96	104	100	100	-46	N
.295027	T/2	T	12,5x50	20	342,1	497,2	37,0	70,2	HB	144	148	T/2	T	92	67	76	78	-50	N
.456878	T/2	T	12,5x50	20	301,8	529,4	34,6	67,2	HB	153	156	T/2	T	51	53	59	54	-46	N

(B05)	N=Normalized	T=Normalized And Tempered	A=Annealed	Q=Quenched And Tempered	S=Solution Treat & Quench
(C01) Location:	F=Full thk.	S=Surface	T/4=1/4 thk.	T/2=1/2 thk.	L=Ladle Analysis P=Product Analysis
(C02) Direction:	T=Transvers	L=Longitudinal	R=Radial	Q=Tangential	

NOTE:
- Material Fully Killed & fine grain
- Material according to ASTM A350/A350M-23
  Material according to ASME II Part.A SA-350/SA-350M Ed.2023
- Material normalized at 920°C
- Material in compliance with specification and order
  Where not indicate content of V & Nb less than 0,001%
- For more than one forging shipped per heat, hardness test is performed on two different forgings

(Z03) Inspection Representative	(Z05) Inspection Authority	(Z06) Customer
FERRARI s.r.l. Luca Ravagli		

This document has been prepared electronically and is valid without signature

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MARCEGAGLIA PLATES SPA	1724001793	123B00	Q012400909

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **28.10.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024672425 | Creato il 21/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680423
Of/Del 21/10/2024
Delivery note nr/N° doc. di trasp. 1060013017

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/2

Material/Codice Materiale
LTS

Description/Descrizione
30,00 X 2500,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/30**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E8012490	2462622	7200	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24E8012490	.161	1.457	.210	.0070	.0070	.024	.013	.024	.050	.0010	.031	.001	.0020	.0040	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24E8012490	P	1	P	T	20	515	389	32.0	1	P	L	10.0	-20	298	280	271	283	55	51	53	53	24-12932N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

Firma
IIIIivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024658913 | Creato il 14/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680425
Of/Del 14/10/2024
Delivery note nr/N° doc. di trasp. 1060012654

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/2

Material/Codice Materiale
LTS

Description/Descrizione
15,00 X 2500,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/40**
Client Order/Ordine cliente **1724001793**
Materiale Cliente
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EP021659	2462615	3600	1
2	24EW004947	2462587	3600	1
3	24EW004948	2462636	3600	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EP021659	.166	1.460	.207	.0060	.0090	.021	.008	.014	.049	.0010	.034	.001	.0020	.0050	.42
24EW004947	.157	1.439	.171	.0030	.0140	.029	.006	.011	.045	.0010	.028	.001	.0010	.0040	.40
24EW004948	.155	1.449	.194	.0050	.0090	.031	.019	.027	.067	.0010	.028	.001	.0020	.0040	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	Tst [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	355	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EP021659	P	1	P	T	20	521	405	27.0	1	P	L	10.0	-20	226	208	211	215	42	36	36	38	24-12905N
24EW004947	P	1	P	T	20	536	414	30.0	1	P	L	10.0	-20	240	225	249	238	41	38	39	39	24-12906N
24EW004948	P	1	P	T	20	526	405	29.0	1	P	L	10.0	-20	249	214	233	232	43	37	39	39	24-12904N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°
2	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°
3	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024658913 | Creato il 14/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680425
Of/Del 14/10/2024
Delivery note nr/N° doc. di trasp. 1060012654

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/2

Material/Codice Materiale
LTS

Description/Descrizione
30,00 X 2600,00 X 13700,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/90**
Client Order/Ordine cliente **1724001793**
Materiale Cliente
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EP020616	2462629	8549	1
2	24EP020618	2462636	8549	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EP020616	.159	1.438	.192	.0060	.0070	.017	.008	.013	.062	.0010	.031	.001	.0020	.0040	.40
24EP020618	.155	1.449	.194	.0050	.0090	.031	.019	.027	.067	.0010	.028	.001	.0020	.0040	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EP020616	P	1	P	T	20	501	386	30.0	1	P	L	10.0	-20	252	248	237	245	52	55	51	52	24-12267N
24EP020618	P	1	P	T	20	498	379	30.0	1	P	L	10.0	-20	288	252	263	267	63	62	66	63	24-12266N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°
2	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede,(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore,(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024672425 | Creato il 21/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680423
Of/Del 21/10/2024
Delivery note nr/N° doc. di trasp. 1060013017

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/2

Material/Codice Materiale
LTS

Description/Descrizione
50,00 X 2000,00 X 12500,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/10**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E8012363	2465138	10000	1
2	24E8012364	2465148	10000	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24E8012363	.159	1.444	.177	.0040	.0140	.040	.015	.038	.053	.0010	.029	.002	.0020	.0040	.41
24E8012364	.153	1.442	.190	.0030	.0120	.050	.015	.030	.046	.0010	.028	.001	.0020	.0040	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20	470	335	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24E8012363	C	1	1/4	T	20	509	344	34.0	1	1/4	L	10.0	-20	260	264	248	257	62	69	61	64	24-12947N
24E8012364	C	1	1/4	T	20	571	410	33.0	1	1/4	L	10.0	-20	259	253	263	258	60	66	68	64	24-12946N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	DP25/2	2 MHz	0°
2	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	DP25/2	2 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIliv EN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024681586 | Creato il 23/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920691178
Of/Del 23/10/2024
Delivery note nr/N° doc. di trasp. 1060013159

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/2

Material/Codice Materiale
LTS

Description/Descrizione
40,00 X 2850,00 X 12500,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/20**
Materiale Cliente
Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG007758	2464969	11400	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG007758	.151	1.491	.188	.0050	.0150	.025	.008	.013	.050	.0010	.029	.002	.0020	.0030	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EG007758	C	1	1/4	T	20	525	384	32.0	1	P	L	10.0	-20	203	190	196	196	58	46	48	50	24-13404N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024681586 | Creato il 23/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920691178
Of/Del 23/10/2024
Delivery note nr/N° doc. di trasp. 1060013159

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/2

Material/Codice Materiale
LTS

Description/Descrizione
40,00 X 2700,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/60**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG007760	2464994	10368	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG007760	.162	1.443	.192	.0040	.0120	.034	.010	.016	.042	.0010	.030	.002	.0010	.0050	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EG007760	C	1	1/4	T	20	523	375	29.0	1	P	L	10.0	-20	212	202	207	207	56	60	55	57	24-13407N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede,(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore,(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

1800/ 3402

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024686620 | Creato il 25/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920691180
Of/Del 25/10/2024
Delivery note nr/N° doc. di trasp. 1060013232

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/1

Material/Codice Materiale
LTS

Description/Descrizione
40,00 X 2500,00 X 13700,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/80**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG007762	2464990	10960	1
2	24EG007764	2464994	10960	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
	0.2	0.9 1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.02 0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG007762	.158	1.431	.174	.0020	.0170	.040	.016	.042	.055	.0010	.027	.002	.0010	.0030	.41
24EG007764	.162	1.443	.192	.0040	.0120	.034	.010	.016	.042	.0010	.030	.002	.0010	.0050	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20 20	470 630	345	22					-20 -20	40	40	40	40	35	35	35		
24EG007762	C	1	1/4	T	20	521	374	29.0	1	P	L	10.0	-20	212	214	214	213	53	61	58	57	24-13406N
24EG007764	C	1	1/4	T	20	517	382	32.7	1	P	L	10.0	-20	213	219	206	212	68	66	62	65	24-13403N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°
2	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
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www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024676369 | Creato il 21/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680427
Of/Del 21/10/2024
Delivery note nr/N° doc. di trasp. 1060013021

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/3

Material/Codice Materiale
LTS

Description/Descrizione
15,00 X 2500,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/70**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EP021660	2462587	3600	1
2	24EP021661	2462611	3600	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EP021660	.157	1.439	.171	.0030	.0140	.029	.006	.011	.045	.0010	.028	.001	.0010	.0040	.40
24EP021661	.157	1.442	.175	.0060	.0140	.027	.007	.015	.049	.0010	.027	.002	.0010	.0060	.40

Batch/N° Partita	Forma	(1)	(2)	(3)	Tst [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20	470	355	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EP021660	P	1	P	T	20	524	406	30.0	1	P	L	10.0	-20	248	233	242	241	51	63	55	56	24-12903N
24EP021661	P	1	P	T	20	516	394	32.0	1	P	L	10.0	-20	197	201	188	195	61	60	68	63	24-12902N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°
2	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIIivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024676369 | Creato il 21/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680427
Of/Del 21/10/2024
Delivery note nr/N° doc. di trasp. 1060013021

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/3

Material/Codice Materiale
LTS

Description/Descrizione
30,00 X 2500,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/30**
Client Order/Ordine cliente **1724001793**
Materiale Cliente
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E8012491	2462615	7200	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24E8012491	.166	1.460	.207	.0060	.0090	.021	.008	.014	.049	.0010	.034	.001	.0020	.0050	.42

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24E8012491	P	1	P	T	20	520	376	30.0	1	P	L	10.0	-20	213	227	223	221	48	46	48	47	24-12931N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204

questo documento è stato generato automaticamente ed è valido senza firma

Number/Numero 16024676369 Creato il 21/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920680427
Of/Del 21/10/2024
Delivery note nr/N° doc. di trasp. 1060013021

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 3/3

Material/Codice Materiale
LTS

Description/Descrizione
50,00 X 2450,00 X 12000,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/50**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24E8012492	2465148	11760	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24E8012492	.153	1.442	.190	.0030	.0120	.050	.015	.030	.046	.0010	.028	.001	.0020	.0040	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv^a [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv^a	TESTN
					20	470	335	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24E8012492	C	1	1/4	T	20	540	350	30.0	1	1/4	L	10.0	-20	257	237	251	248	43	40	48	43	24-12942N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	DP25/2	2 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede,(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore,(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UK CA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

1804/ 3402

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024705012 | Creato il 04/11/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920700451
Of/Del 04/11/2024
Delivery note nr/N° doc. di trasp. 1060013617

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/1

Material/Codice Materiale
LTS

Description/Descrizione
30,00 X 2600,00 X 13700,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/90**
Materiale Cliente

Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG008037	340627	8549	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG008037	.150	1.450	.210	.0020	.0170	.010	.010	.010	.033	.0000	.032	.001	.0010	.0030	.40

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20	470	345	22					-20	40								
					20	630							-20									
24EG008037	P	1	P	T	20	531	400	31.0	1	P	L	10.0	-20	223	212	227	220	59	48	50	52	24-14055N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

Firma
IIIIivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

1805/3402

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024691123 | Creato il 28/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920694511
Of/Del 28/10/2024
Delivery note nr/N° doc. di trasp. 1060013329

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 1/2

Material/Codice Materiale
LTS

Description/Descrizione
40,00 X 2850,00 X 12500,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/20**
Client Order/Ordine cliente **1724001793**
Materiale Cliente
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG007756	2464976	11400	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
	0.2	0.9 1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.02 0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG007756	.156	1.433	.187	.0040	.0150	.043	.023	.032	.054	.0010	.029	.002	.0020	.0030	.41

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20 20	470 630	345	22					-20 -20	40	40	40	40	35	35	35		
24EG007756	C	1	1/4	T	20	522	378	32.0	1	P	L	10.0	-20	210	200	211	207	58	46	48	50	24-13405N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

Firma
IIIlivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

MARCEGAGLIA PLATES

Marcegaglia
46040 Via Bresciani, 16-Gazoldo degli Ippoliti Mantova-Italy
Tel. +39 - 0376 685 1 Fax. +39 - 0376 685 600
www.marcegaglia.com

Stab. di S.Giorgio di Nogaro:
via Enrico Fermi 33, 33058 S.Giorgio di Nogaro-Udine
tel+390431624111 fax 0431624222

Type/Tipo 3.1 CERTIFICATO DI COLLAUDO EN10204 | questo documento è stato generato automaticamente ed è valido senza firma | Number/Numero 16024691123 | Creato il 28/10/2024

Product: Hot Rolled Heavy Plates
NormaCollaudoLamieraTreno: EN10025-3:2019
Steel grade:: S355N

Customer/Cliente
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Code: 0000006372

Del. Address/Destinatario Merci
ROSETTI MARINO S.P.A.
VIA TRIESTE 230
48100 RAVENNA IT

Delivery/N° Consegna 8920694511
Of/Del 28/10/2024
Delivery note nr/N° doc. di trasp. 1060013329

Quality Control/Controllo Qualità
Q.M.D./RESP. M.Quargnali
Plant/Stab. S. Giorgio di Nogaro

Pages/Pagine 2/2

Material/Codice Materiale
LTS

Description/Descrizione
40,00 X 2500,00 X 13700,00 S355N

Surface Quality: EN10163-2 CL A2
Flatness: rif EN 10029 cl. N
Thickness tolerance: EN10029 CLASSE B

Delivery Condition: NORMALIZED IN FURNACE
Steel Making Process: BO= Basic oxigen

Order Nr/ordine **1191802184/80**
Materiale Cliente
Client Order/Ordine cliente **1724001793**
Client Date/data cliente **9/09/2024**

Item	Batch/N° Partita	Heat/Colata	Quantity/Q.tà KG	Quantity/Q.tà PZZ
1	24EG007766	2464961	10960	1

Remarks/Note:
Plates acc. to EN10164 - Z35
The Declaration of Performance (DOP) can be downloaded from the following web page:
www.quality.marcegaglia.com/marcegaglia-plates-dop

Batch/N° Partita	C (%)	Mn (%)	Si (%)	S (%)	P (%)	Cr (%)	Ni (%)	Cu (%)	Al (%)	Mo (%)	Nb (%)	V (%)	Ti (%)	N (%)	Ceq (%)
		0.9							0.02						
	0.2	1.65	0.5	0.025	0.03	0.3	0.5	0.55	0.3	0.1	0.05	0.12	0.05	0.015	0.43
24EG007766	.154	1.426	.207	.0030	.0110	.032	.013	.029	.047	.0010	.029	.002	.0020	.0040	.40

Batch/N° Partita	Forma	(1)	(2)	(3)	T [°C]	Rm [N/mmq]	ReH [N/mmq]	A% (%)	(1b	(2b	(3b	(4b)	T [°C]	Kv1 [J]	Kv2 [J]	Kv3 [J]	Kv[a] [J]	Z1 [%]	Z2 [%]	Z3 [%]	Zv[a]	TESTN
					20	470	345	22					-20	40	40	40	40	35	35	35		
					20	630							-20									
24EG007766	C	1	1/4	T	20	522	398	34.7	1	P	L	10.0	-20	210	223	221	218	68	67	70	68	24-13402N

Controllo ad ultrasuoni

Apparecchiatura	Numero di serie	Condizioni di superficie	Accoppiante	Mod. operativie	Taratura
Gilardoni RDG/700	I001288	As Rolled	Acqua	Secondo le specifiche	Secondo le specifiche

Item	Norma di riferimento	Classe accettabilità	Esito	Indicazioni	Reticolo	Bordi	Sonda	Frequenza	Angolo
1	EN10160	CL.S2 E3	Ok	Not founded	100x100mm	50	BDD20/4	4 MHz	0°

- Material Free of radioactive contamination
- Dimensional check and visual examination of the surface condition: without objection
- We Declare that the above mentioned plates are in compliance with the order prescription
- We hereby declare that the above mentioned material have been manufactured in Italy, thus of European Community origin

Firma
IIIIivEN/ISO9712
Q.M.D. M.Quargnali

MARCEGAGLIA PLATES

(1)Posizione:1=Testa;2=Piede.(2)Posizione:1/2=1/2 spessore;P=Pelle;1/4=1/4 spessore.(3)Direzione:L=Longitudinale;T=Trasversale;(4)Spessore provino

DescrizioneMarchi

UKCA 1244 22 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

CE 0474 MARCEGAGLIA PLATES v. Enrico Fermi, 33 33058 - S. Giorgio Nogaro Udine - Italy EN 10025-1 EN 10025-3

1807/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA SRL	1724001929	123A40C	Q012401008

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **04.12.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 5225296
Delivery note number 5225296 from 17 October 2024 A03

A08 Our reference : 1100710274
A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

Ord.item	Product (B01)	Length	Weight (B13)	Heat nr (B07)	Weight	Bund.	Bars (B08)
000001	HE 800 B	12.800 mm	29,529 to	85626	29,529 to		9

Heat nr (B07)	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
85626	0,07	0,88	0,016	0,022	0,18	0,014	0,002	0,30	0,16	0,11	0,031	0,007	0,040	0,001	0,0003	0,28

Heat nr (B07)	Tensile test N/mm2 ReH (C11)	N/mm2 Rm (C12)	5,65VS A(%) (C13)	Charpy impact test C40 KV Position (C01)	(C02)	mm (C41)	UNAGED °C (C03)	J 1 (C42)	2	3	M (C43)
Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
85626	448	530	25,71	FL.1/3	L		-20	73	116	126	105

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 800448839 DEL 26/11/24
KG. 24760
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate Nr X 5225296

Delivery note number 5225296 from 17 October 2024 A03

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

DICHIARAZIONE DI PRESTAZIONE

Declaration of Performance

ArcelorMittal

NR. 26991

Fabbricante: **ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA**
VIA CASELLE, 57 - 25020 FLERO

1. Prodotto: **TRAVI E/O ANGOLARI IN ACCIAIO PER USO STRUTTURALE**

2. RIFERIMENTO CLIENTE: ROSETTI MARINO S.P.A.

ORDINE: 040 **DDT** 800448839

Il prodotto deve essere utlizzato conformemente alla specifica tecnica armonizzata UNI EN 1090-1:2009 + A1:2011 e UNI EN 1090-2

Sistema di valutazione della prestazione del prodotto di cui all allegato V del regolamento UE305/2011:2+

L'organismo DNV GL Business Assurance Italia S.r.l. - n0496 ha rilasciato il CERTIFICATO DI CONFORMITA' DEL CONTROLLO DELLA PRODUZIONE IN FABBRICA N°0496-CPR-0050 in accordo al Regolamento Prodotti da Costruzione E305/2011CE

CE 16

3. Prestazione dichiarata metodo 1, 3A

Caratteristiche essenziali (cfr nota 1) Prestazione (cfr nota 2) Specifica tecnica armonizzata (cfr nota3)

Caratteristiche essenziali	Prestazione	Specifica tecnica armonizzata
Tolleranze sui dati geometrici	***EN 1090-2***	*EN 1090-1*
Saldabilità	***S355 J2+M secondo la norma EN 10025-2***	*EN 1090-1 e EN 10025-1*
Resistenza alla rottura	***27 Joule a - 20°C***	*EN 1090-1 e EN 10025-1*
Reazione al fuoco	***Materiale classificato Classe A1***	*EN 1090-1*
Rilascio di cadmio	***NPD***	*EN 1090-1*
Emissione di radioattività	***NPD***	*EN 1090-1*
Durabilità	***NPD***	*EN 1090-1*
Capacità di supporto del carico	***NPD***	*EN 1090-1*
Resistenza a fatica	***NPD***	*EN 1090-1*
Resistenza al fuoco	***NPD***	*EN 1090-1*
Caratteristiche strutturali	***Fornito dall'acquirente Dis.***	*EN 1090-1*
Fabbricazione	***Secondo la specifica del Cliente*** 040 ***e la EN 1090-2, EXC*** 2 .	*EN 1090-1*

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alle prestazioni dichiarate di cui al punto 3. Si rilascia la presente dichiarazione di Prestazione sotto la responsabilità esclusiva del fabbricante.

Flero, 26 novembre 2024

Il Legale Rappresentante
Vincio Stefano

1811/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA SRL	1724001929	123A40C	Q012401009

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 04.12.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 5225534

Delivery note number 5225534 from 17 October 2024 A03

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	12.800 mm	29,259 to	85623	19,506 to		6
				85628	9,753 to		3

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
85623	0,07	0,89	0,016	0,017	0,21	0,010	0,003	0,29	0,14	0,10	0,028	0,008	0,040	0,001	0,0003	0,28
85628	0,07	0,89	0,016	0,014	0,19	0,014	0,003	0,30	0,15	0,09	0,034	0,008	0,040	0,001	0,0003	0,28

Heat nr	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
85623	449	536	27,45	FL.1/3	L		-20	166	130	158	151
85628	465	545	28,32	FL.1/3	L		-20	112	145	161	139

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale

Z03

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000418883 DEL 26/11/24
KG. 16192
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal
A05

Mill Test Certificate NrX 5225534

Delivery note number 5225534 from 17 October 2024 A03

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal
A05

Mill Test Certificate Nr X 5225296

Delivery note number 5225296 from 17 October 2024 A03

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	12.800 mm	29,529 to	85626	29,529 to		9

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					**0,14**											
	Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
85626		0,07	0,88	0,016	0,022	0,18	0,014	0,002	0,30	0,16	0,11	0,031	0,007	0,040	0,001	0,0003	0,28

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
B07												
	Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
	Max		**630**									
85626		448	530	25,71	FL.1/3	L		-20	73	116	126	105

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000144883 DEL 26/11/24
Z03 G. 3851
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate Nr X 5225296

Delivery note number 5225296 from 17 October 2024 A03

A08 Our reference : 1100710274
A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

0769
06

0038
21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

DICHIARAZIONE DI PRESTAZIONE

Declaration of Performance

ArcelorMittal

NR. 26992

Fabbricante: **ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA**
VIA CASELLE, 57 - 25020 FLERO

1. Prodotto: **TRAVI E/O ANGOLARI IN ACCIAIO PER USO STRUTTURALE**

2. RIFERIMENTO CLIENTE: ROSETTI MARINO S.P.A.

ORDINE: 040 **DDT** 800448883

Il prodotto deve essere utlizzato conformemente alla specifica tecnica armonizzata UNI EN 1090-1:2009 + A1:2011 e UNI EN 1090-2

Sistema di valutazione della prestazione del prodotto di cui all allegato V del regolamento UE305/2011:2+

L'organismo DNV GL Business Assurance Italia S.r.l. - n0496 ha rilasciato il CERTIFICATO DI CONFORMITA' DEL CONTROLLO DELLA PRODUZIONE IN FABBRICA N°0496-CPR-0050 in accordo al Regolamento Prodotti da Costruzione E305/2011CE

CE 16

3. Prestazione dichiarata metodo 1, 3A

Caratteristiche essenziali (cfr nota 1) Prestazione (cfr nota 2) Specifica tecnica armonizzata (cfr nota3)

Caratteristiche essenziali	Prestazione	Specifica tecnica armonizzata
Tolleranze sui dati geometrici	***EN 1090-2***	*EN 1090-1*
Saldabilità	***S355 J2+M secondo la norma EN 10025-2***	*EN 1090-1 e EN 10025-1*
Resistenza alla rottura	***27 Joule a - 20°C***	*EN 1090-1 e EN 10025-1*
Reazione al fuoco	***Materiale classificato Classe A1***	*EN 1090-1*
Rilascio di cadmio	***NPD***	*EN 1090-1*
Emissione di radioattività	***NPD***	*EN 1090-1*
Durabilità	***NPD***	*EN 1090-1*
Capacità di supporto del carico	***NPD***	*EN 1090-1*
Resistenza a fatica	***NPD***	*EN 1090-1*
Resistenza al fuoco	***NPD***	*EN 1090-1*
Caratteristiche strutturali	***Fornito dall'acquirente Dis.***	*EN 1090-1*
Fabbricazione	***Secondo la specifica del Cliente*** 040 ***e la EN 1090-2, EXC*** 2 .	*EN 1090-1*

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alle prestazioni dichiarate di cui al punto 3. Si rilascia la presente dichiarazione di Prestazione sotto la responsabilità esclusiva del fabbricante.

Flero, 26 novembre 2024

Il Legale Rappresentante
Vincio Stefano

1817/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA SRL	1724001929	123A40C	Q012401010

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 22.11.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 5231975
Delivery note number 5231975 from 26 October 2024 A03

A08 Our reference : 1100710274
A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	12.800 mm	9,909 to	85626	9,909 to		3

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					**0,14**											
	Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
85626		0,07	0,88	0,016	0,022	0,18	0,014	0,002	0,30	0,16	0,11	0,031	0,007	0,040	0,001	0,0003	0,28

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
B07												
	Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
	Max		**630**									
85626		447	538	25,71	FL.1/3	L		-20	81	154	162	132

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

Z03

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8000135417 DEL 21/11/24
KG. 662
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate NrX 5231975

Delivery note number 5231975 from 26 October 2024 A03

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN
Materiel proudly Melted (at liquid state), poured and rolled in LUXEMBOURG

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 5225534
Delivery note number 5225534 from 17 October 2024 A03

A08 Our reference : 1100710274
A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 800 B	12.800 mm	29,259 to	85623	19,506 to		6
				85628	9,753 to		3

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,22**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
85623	0,07	0,89	0,016	0,017	0,21	0,010	0,003	0,29	0,14	0,10	0,028	0,008	0,040	0,001	0,0003	0,28
85628	0,07	0,89	0,016	0,014	0,19	0,014	0,003	0,30	0,15	0,09	0,034	0,008	0,040	0,001	0,0003	0,28

Tensile test / **Charpy impact test**

B07 Heat nr	N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
85623	449	536	27,45	FL.1/3	L		-20	166	130	158	151
85628	465	545	28,32	FL.1/3	L		-20	112	145	161	139

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

COPIA CONFORME ALL'ORIGINALE
CERTIFICATO VALIDO PER BOLLA
N. 8006135617 DEL 21/11/24
KG. 23108
ArcelorMittal Distribution Solutions Italia S.r.l.

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
ArcelorMittal
A05

Mill Test Certificate Nr X 5225534

Delivery note number 5225534 from 17 October 2024 A03

A08 Our reference : 1100710274

A07 Your reference : 4500802227
27.09.2024
ARCELORMITTAL DISTRIBUTION

ARCELORMITTAL DISTRIBUTION
SOLUTIONS ITALIA S.R.L.
VIALE BRENTA 27/29
I-20139 MILANO MI
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

DICHIARAZIONE DI PRESTAZIONE

Declaration of Performance

ArcelorMittal

NR. 26960

Fabbricante: **ARCELORMITTAL DISTRIBUTION SOLUTIONS ITALIA**
VIA CASELLE, 57 - 25020 FLERO

1. Prodotto: **TRAVI E/O ANGOLARI IN ACCIAIO PER USO STRUTTURALE**

2. RIFERIMENTO CLIENTE: ROSETTI MARINO S.P.A.

ORDINE: 1929 **DDT** 800435417

Il prodotto deve essere utlizzato conformemente alla specifica tecnica armonizzata UNI EN 1090-1:2009 + A1:2011 e UNI EN 1090-2

Sistema di valutazione della prestazione del prodotto di cui all allegato V del regolamento UE305/2011:2+

L'organismo DNV GL Business Assurance Italia S.r.l. - n0496 ha rilasciato il CERTIFICATO DI CONFORMITA' DEL CONTROLLO DELLA PRODUZIONE IN FABBRICA N°0496-CPR-0050 in accordo al Regolamento Prodotti da Costruzione E305/2011CE

CE 16

3. Prestazione dichiarata metodo 1, 3A

Caratteristiche essenziali (cfr nota 1) Prestazione (cfr nota 2) Specifica tecnica armonizzata (cfr nota3)

Caratteristiche essenziali	Prestazione	Specifica tecnica armonizzata
Tolleranze sui dati geometrici	***EN 1090-2***	*EN 1090-1*
Saldabilità	***S355 J2+M secondo la norma EN 10025-2***	*EN 1090-1 e EN 10025-1*
Resistenza alla rottura	***27 Joule a - 20°C***	*EN 1090-1 e EN 10025-1*
Reazione al fuoco	***Materiale classificato Classe A1***	*EN 1090-1*
Rilascio di cadmio	***NPD***	*EN 1090-1*
Emissione di radioattività	***NPD***	*EN 1090-1*
Durabilità	***NPD***	*EN 1090-1*
Capacità di supporto del carico	***NPD***	*EN 1090-1*
Resistenza a fatica	***NPD***	*EN 1090-1*
Resistenza al fuoco	***NPD***	*EN 1090-1*
Caratteristiche strutturali	***Fornito dall'acquirente Dis.***	*EN 1090-1*
Fabbricazione	***Secondo la specifica del Cliente*** 1929 ***e la EN 1090-2, EXC*** 2 .	*EN 1090-1*

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alle prestazioni dichiarate di cui al punto 3. Si rilascia la presente dichiarazione di Prestazione sotto la responsabilità esclusiva del fabbricante.

Flero, 21 novembre 2024

Il Legale Rappresentante
Vincio Stefano

1823/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724002081	122A70C	Q012401026

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **05.12.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000935** **Rev. N°:** **0** **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000	20	508X26,19	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	6,29	HUTA BATORY	899743	2111/2024/AH
				1	6,23	HUTA BATORY	899743	2111/2024/AH
				1	7,25	HUTA BATORY	900105	2760/2024/AH
			Total:	**3**	**19,77**			
20000	30	508X19,05	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	6,83	HUTA BATORY	898867	223/EXP/24
			Total:	**1**	**6,83**			
30000	40	508X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	11,23	HUTA BATORY	898359	H2301104/1/1
			Total:	**1**	**11,23**			
40000	50	508X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	8,74	HUTA BATORY	899516	2133/2024/AH

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR E.BOTTI
DATE 26 NOV. 2024

Tubi Acciaio Lombarda S.p.A.
INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000935** **Rev. N°:** **0** **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**1**	**8,74**			
50000	60	406,4X25,4	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52					
				1	8,88	ARCELORMITTAL ROMAN	70412	B 25361/3
			Total:	**1**	**8,88**			
60000	70	406,4X21,44	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,63	ARCELORMITTAL ROMAN	73442	B 29617/4
				1	9,9	ARCELORMITTAL ROMAN	73669	B 29731/1
			Total:	**2**	**20,53**			
70000	80	406,4X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,63	ARCELORMITTAL ROMAN	818906	B 30405/1
			Total:	**1**	**11,63**			
80000	110	323,8X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,09	INTERPIPE NIKO TUBE	1243874	24C10747

BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR DATE 26 NOV. 2024

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000935** **Rev. N°:** **0** **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**1**	**10,09**	NIKOPOL		
90000	170	273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,78	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,78	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
			Total:	**4**	**47,1**			
100000	140	219,1X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				2	23,22	ARCELORMITTAL ROMAN	489144	B 30793/2
				1	11,6	ARCELORMITTAL ROMAN	489145	B 30793/2
				5	58,5	ARCELORMITTAL ROMAN	489144	B 30793/2

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000935 **Rev. N°:** 0 **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
				5	58,42	ARCELORMITTAL ROMAN	489144	B 30793/2
			Total:	**13**	**151,74**			
110000	150	219,1X10,31	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	10,81	ARCELORMITTAL ROMAN	819236	B 30454/1
				1	10,68	ARCELORMITTAL ROMAN	819236	B 30454/1
			Total:	**2**	**21,49**			
120000	160	168,3X10,97	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				2	23,2	ARCELORMITTAL ROMAN	2403292	B 30638/6
				1	11,56	ARCELORMITTAL ROMAN	2403294	B 30638/7
			Total:	**3**	**34,76**			
130000	90	355,6X23,83	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	8,37	ARCELORMITTAL ROMAN	809077	B 30410/1
				1	8,82	ARCELORMITTAL ROMAN	2403323	B 30410/2

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BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
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Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**2**	**17,19**			
140000	120	273X15,88	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,7	ARCELORMITTAL ROMAN	819221	B 30666/2
				1	11,72	ARCELORMITTAL ROMAN	819221	B 30666/2
			Total:	**2**	**23,42**			
150000	130	273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,78	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,61	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R

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Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

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Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,76	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,77	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,76	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,78	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,74	INTERPIPE NIKO TUBE DNIPRO	1241673	2213/4
				1	11,76	INTERPIPE NIKO TUBE DNIPRO	1241674	2213/4 R
				1	11,49	INTERPIPE NIKO TUBE NIKOPOL	1240762	24B2951
				2	23,43	INTERPIPE NIKO TUBE NIKOPOL	1240762	24B2831
				1	11,53	INTERPIPE NIKO TUBE NIKOPOL	1240762	24B2831

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BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV 2024

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: **ROSETTI MARINO S.P.A.**

N° Insp.Report: **00000000000000000935** **Rev. N°:** **0** **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002472

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
			Total:	**16**	**187,49**			
160000	130	273X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,75	ARCELORMITTAL ROMAN	819188	B 30476/2
				1	11,7	ARCELORMITTAL ROMAN	819188	B 30476/2
				1	11,68	ARCELORMITTAL ROMAN	819188	B 30476/1
				1	11,67	ARCELORMITTAL ROMAN	819188	B 30476/1
			Total:	**4**	**46,8**			
170000	180	219,1X12,7	Tubi SS CARB. ASTM/ASME A/SA 333/6/API 5L/X52/PSL2					
				1	11,78	ARCELORMITTAL ROMAN	2403292	B 30793/2
			Total:	**1**	**11,78**			

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
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alchemia
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 2111/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/ Strona Page Page Seite Страница 1/2

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 240379	**H2400533/24/1** **148338,148339**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplementaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusäzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/23/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to ASME B16.25 fig. 3A. Normalized 910°C/52'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	(B09) **20" x 1,031"** **(508 x 26,19 mm)** **5 - 7 m**	(B02) **X52N/L360N/6** **P355NL1+N**	(B07) **899743**	(B08) **4**	(B15) **26,40**	(B13) **8114**

BUREAU VERITAS
VISA'D
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,15	1,27	0,20	0,010	0,005	0,08	0,09	0,17
product analysis	0,16	1,24	0,20	0,010	0,005	0,09	0,09	0,17
product analysis	0,16	1,26	0,20	0,011	0,004	0,10	0,09	0,16
(B07) **899743**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,031	0,009	0,000	0,001	0,41	
product analysis	0,04	0,05	0,028	0,011	0,000	0,002	0,43	
product analysis	0,04	0,05	0,031	0,011	0,000	0,001	0,42	

Approved by QUALITY1 on 07/08/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 12,52 HEAT 899743 DIMENSIONS 508 x 26,19 ITEM 20

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	**$Rt_{0,5}$** **MPa**	**Rm** **MPa**	**A 2"** **%**	**Z** **%**	**Badanie udarności** Impact Impact test Kerbschlagprobe Испытание на удар **acc. to ASTM A370 KV(10x10mm) (L) min 40J/-52°C** (C40,C41,C02)		**Twardość** Dureté Hardness Härte Твердость **Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB** (C30)	**MPa min**
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: ø½"					**mixed area**			
899743/9410	**386**	**546**	**34,5**		**160 - 142 - 124**	**143**	**151 HB**	
899743/9411	**379**	**534**	**33,6**				**149 HB**	
Longitudinal								
	acc. to EN ISO 6892-1							
	Re	**Rm**	**A5 %**		**Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C**			
	min	**490**	**min**					
	345	**650**	**22,0**					
899743/9411	**367**	**528**	**33,6**		**137 - 124 - 123**	**128**		
Longitudinal								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)
Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

9410,9411,9412,9413

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande. - We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht. - Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL1 - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
KJ 21/632		
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 25.07. 2024 r.** 2111/2024/AH Strona Page Page Seite Страница 2/2

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE

Approved by QUALITY1 on 07/08/24

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L.P.M. s.n.c.

Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 4

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08415	472/1	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto – Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508, THK. 26.19 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/1	24CA08415	899743

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 4

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION Ei		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/1	24CA08415	24PR46478	Ø 12.43	121.35	50	TM	+ 24	≥ 360 ≤ 530	371	≥ 460 ≤ 760	542	≥ 20.6	30.0	≤0.93	0.68

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY MESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 4

Risultati prova di trazione attraverso lo spessore – Tensile test through the thickness results

Metodo di prova – Test method: **UNI EN 10164:2018** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT Lc	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		STRIZIONE REDUCTION OF AREA Z		
								Rp 0.2% Richiesto Required	Rp 0.2% Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required AVE./MIN.	Ottenuto Result	Media Average
NO.	NO.	NO.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%	%
472/1	24CA08415	24PR46529	Ø 6.00	28.27	9	Z	+ 22	INFO	328	INFO	564	-	68	
472/1	24CA08415	24PR46530	Ø 5.98	28.09	9	Z	+ 22	INFO	330	INFO	569	-	66	65
472/1	24CA08415	24PR46531	Ø 5.97	27.99	9	Z	+ 22	INFO	331	INFO	564	-	64	

Note:
Note:

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; S4: SAMPLET AT 1/4 OF THE THK.
L: LONGITUDINAL; T: TRANSVERSAL; Z: THROUGH THE THICKNESS.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY EXAMINED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 4 **di** of 4

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
472/1	24CA08415	24PR46477	10x10x55	LB	-50	≥27/27	162	158	141	154	-			-	

Note – Notes: TEST TEMPERATURE AND VALUES ACC. TO SAMPLING SHEET No. 24/122.

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: **B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 7,25 HEAT 900105 DIMENSIONS 508 x 26,19 ITEM 20

alchemia
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 2760/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/

(A10÷A99) **Wytwórca Stali -** Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 240549	**H2400790/18/1** **152526,152527**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. l. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/23/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to ASME B16.25 fig. 3A. Normalized 910°C/52'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	(B09) **20" x 1,031"** **(508 x 26,19 mm)** **5,5 - 7,5 m**	(B02) **X52N/L360N/6** **P355NL1+N**	(B07) **900105**	(B08) **2**	(B15) **13,83**	(B13) **4271**

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,15	1,26	0,23	0,009	0,002	0,07	0,15	0,18
product analysis	0,17	1,24	0,22	0,009	0,003	0,07	0,15	0,18
product analysis	0,17	1,25	0,23	0,009	0,003	0,07	0,15	0,18
(B07) **900105**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,036	0,010	0,001	0,001	0,41	
product analysis	0,04	0,05	0,032	0,012	0,001	0,001	0,43	
product analysis	0,04	0,05	0,032	0,013	0,001	0,001	0,43	

Approved by QUALITY1 on 04/10/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 7,25 HEAT 900105 DIMENSIONS 508 x 26,19 ITEM 20

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$Rt_{0,5}$ **MPa** 360 530	**Rm** **MPa** 460 760	**A 2"** **%** **min** 22,0	**Z** **%**	**Badanie udarności** Impact Impact test Kerbschlagprobe Испытание на удар **acc. to ASTM A370** **KV(10x10mm) (L) min 40J/-52°C** (C40,C41,C02)		**Twardość** Dureté Hardness Härte Твердость **Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB** (C30)	**MPa min**
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00) **Test size: Ø½"**	(C11)	(C12)	(C13)	(C50-69)	(C42) **mixed area**	(C43)	(C31)	(C50-C69)
900105/12642	**373**	**536**	**34,1**		**200 - 150 - 148**	**166**	**165 HB**	
900105/12643	**373**	**540**	**34,1**				**164 HB**	
Longitudinal								
	acc. to EN ISO 6892-1				**Acc. to EN ISO 148 - 1** **KV(10x10mm) (T) min 27J/-40°C**			
	Re min 345	**Rm 490 630**	**A5 % min 22,0**					
900105/12643	**389**	**545**	**33,6**		**150 - 109 - 112**	**124**		
Longitudinal								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)
Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.
Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок
12643,12644

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande. - We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL1 - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 30.09. 2024 r.**

KJ 21/632

2760/2024/AH
Strona Page Page Seite Страница 2/2

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE

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Approved by QUALITY1 on 04/10/24

L.P.M. s.n.c.

Di Molinari Vincenzo e C.
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ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07629 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 4

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08416	472/2	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto – Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508, THK. 26.19 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/2	24CA08416	900105

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07629 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 4

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm^2	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/2	24CA08416	24PR46480	Ø 12.49	122.52	50	TM	+ 24	≥ 360 ≤ 530	364	≥ 460 ≤ 760	544	≥ 20.6	35.4	≤0.93	0.67

REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 621 PROV. PIACENZA

L.P.M. s.n.c.
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24RP07629 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 4

Risultati prova di trazione attraverso lo spessore – Tensile test through the thickness results

Metodo di prova – Test method: **UNI EN 10164:2018** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT Lc	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		STRIZIONE REDUCTION OF AREA Z		
								Rp 0.2% Richiesto Required	Rp 0.2% Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required AVE./MIN.	Ottenuto Result	Media Average
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%	%
472/2	24CA08416	24PR46532	Ø 6.03	28.56	9	Z	+ 22	INFO	372	INFO	565	-	62	
472/2	24CA08416	24PR46533	Ø 5.99	28.18	9	Z	+ 22	INFO	376	INFO	570	-	62	61
472/2	24CA08416	24PR46534	Ø 6.02	28.46	9	Z	+ 22	INFO	364	INFO	562	-	60	

Note:
Note:

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; S4: SAMPLET AT 1/4 OF THE THK.
L: LONGITUDINAL; T: TRANSVERSAL; Z: THROUGH THE THICKNESS.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV 2024	E.FERRI	ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 PROV. PIACENZA

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP07629 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 4 **di** of 4

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
472/2	24CA08416	24PR46479	10x10x55	LB	-50	≥27/27	176	196	188	187				-	

Note – Notes: **TEST TEMPERATURE AND VALUES ACC. TO SAMPLING SHEET No. 24/122.**

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: **B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da –** Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 6,83 HEAT 898867 DIMENSIONS 508 x 19,05 ITEM 30

alchemia

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 223/EXP/24

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/ Strona Page Page Seite Страница 1/2

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 240035	**H2400091/6/1**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pieces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1 (Errata 1)/2018/ ASTM A333/A333M/18/ ASME SA333/ SEC.II.PART.A/21/ EN 10216-3/13 - TC1. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface lacquered. Bevelled ends acc. to ASME B16.25 fig.2.A. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90.	(B09) **20" x 0,750" (508 x 19,05 mm) 6,5 - 9,5 m**	(B02) **X52/L360/6 P355NL1+N**	(B07) **898867**	(B08) **5**	(B15) **43,88**	(B13) **10510**

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвёл Отдел Технического Контроля. Результат испытания представлен ниже.

I. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
heat analysis	0,14	1,26	0,22	0,007	0,003	0,07	0,09	0,14
product analysis	0,17	1,27	0,21	0,009	0,003	0,07	0,09	0,15
product analysis	0,17	1,27	0,22	0,009	0,003	0,07	0,09	0,14
(B07) **898867**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,05	0,034	0,007	0,000	0,001	0,40	
product analysis	0,04	0,06	0,030	0,009	0,000	0,000	0,43	
product analysis	0,04	0,06	0,030	0,009	0,000	0,000	0,43	

Approved by QUALITY1 on 21/03/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 6,83 HEAT 898867 DIMENSIONS 508 x 19,05 ITEM 30

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	**$Rt_{0,5}$** **MPa min 360**	**Rm** **MPa min 460**	**A 2"** **% min 22,0**	**Z** **%**	**Badanie udarności** Impact Impact test Kerbschlagprobe Испытание на удар **acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C** (C40,C41,C02)		**Twardość** Dureté Hardness Härte Твердость **Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB** (C30)	**MPa min**
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00)	(C11)	(C12)	(C13)	(C50-69)	(C42)	(C43)	(C31)	(C50-C69)
Test size: Ø½"					**Mixed area**		**155**	
898867/1463	**385**	**537**	**43,7**		**196 - 170 - 158**	**175**	**159**	
898867/1464	**378**	**529**	**48,6**					
Longitudinal								
	acc. to EN ISO 6892-1				Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
	Re min 345	**Rm 490 630**	**A5 % min 22,0**					
898867/1464	**374**	**516**	**30,3**		**51 - 124 - 110**	**95**		
Longitudinal								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99) (Z04)
Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,5 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande - We hereby certify, that the material described above has been tested and complies with the terms of the order - Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht. - Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52/L360 - PSL1/A/SA333/6/EN 10216-3/P355NL - TC1.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
Zca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 18.03. 2024 r.** 223/EXP/24 Strona Page Page Seite Страница **2/2**

KJ 21/634

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 21/03/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07630 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08417	472/3	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508 mm WTH. 19.05 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL1	472/3	24CA08417	898867

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07630 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/3	24CA08417	24PR46482	19.05 x 20.33	387.29	50	TM	+ 24	≥ 360	375	≥ 460	530	≥ 25.6	43.2	≤0.93	0.71

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL1.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm . O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07630 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/3	24CA08417	24PR46481	10x10x50	BLM	-50	≥ 27/27	269	271	255	265									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVISED~~ SURVEYOR S.SOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,23 HEAT 898359 DIMENSIONS 508 x 15,88 ITEM 40

alchemia SA
ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 3990/2023/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/ Strona Page Page Seite Страница 1/2

(A10÷A99) **Wytwórca Stali -** Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** T.A.L
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadresse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 230703	**H2301104/1/1** **124263, 124264**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes acc.to API 5L - PSL1 (Errata 1)/2018/ ASTM A333/A333M/18/ ASME SA333/ SEC.II.PART.A/21/ EN 10216-3/13 - TC1. Outside diameter tolerances +/-0,75% and +/-0,5% on ends max 1,6 mm. Outside surface lacquered. Bevelled ends acc. to API5L. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1.(guarantee). Charge material of Polish origin.Raw material and end product of Polish origin. CN code: 7304 19 90	(B09) **20" x 0,625"** **(508 x 15,88 mm)** **10 - 11,8 m**	(B02) **X52/L360/6** **P355NL1+N**	(B07) **898359**	(B08) **3**	(B13) **33,15**	(B15) **6594**

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянугого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
	0,15	1,27	0,21	0,009	0,003	0,05	0,11	0,19
(B07)	0,16	1,27	0,20	0,011	0,003	0,06	0,11	0,19
898359	0,16	1,28	0,20	0,011	0,003	0,06	0,11	0,19
	Mo	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
control analysis	0,05	0,06	0,030	0,011	0,001	0,001	0,41	
control analysis	0,05	0,06	0,028	0,009	0,001	0,001	0,43	
	0,05	0,06	0,029	0,009	0,001	0,001	0,43	

Approved by D.MOLINARI on 08/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,23 HEAT 898359 DIMENSIONS 508 x 15,88 ITEM 40

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	**$Rt_{0,5}$** **MPa min 360**	**Rm** **MPa min 460**	**A 2"** **% min 30,0**	**Z** **%**	**Badanie udarności** Impact Impact test Kerbschlagprobe Испытание на удар **acc.to ASTM A370 KV(10x10mm) (L) min 40J/-52°C** (C40,C41,C02)		**Twardość** Dureté Hardness Härte Твердость **Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB** (C30)	**MPa min**
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00) **Test size: 1½"**	(C11)	(C12)	(C13)	(C50-69)	(C42) **Mixed area**	(C43)	(C31)	(C50-C69)
898359/17022	**402**	**558**	**35,6**		**166 - 167 - 140**	**158**	**159**	
898359/17023	**408**	**564**	**37,8**				**160**	
L								
	acc. to EN ISO 6892-1				**Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C**			
	Re min 355	**Rm 490 650**	**A5 % min 22,0**					
898359/17023	**402**	**537**	**31,8**		**140 - 142 - 136**	**139**		
L								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 20,3 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essaia Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/UE annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-02-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande.- We hereby certify, that the material described above has been tested and complies with the terms of the order.- Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht.- Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52/L360 - PSL1 A333/6/SA333/EN 10216-3/ P355NL - TC1.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	**Dyrekcja** Direction Management Direktion Дирекция (Z05)	(Z02)
Z-ca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	**dn. 02.11. 2023 r.**

KJ 21/634

3990/2023/AH
Strona Page Page Seite Страница **2/2**

BUREAU VERITAS ITALY
INITIALISED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Approved by D.MOLINARI on 08/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07631 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08418	472/4	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508 mm WTH. 15.88 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL1	472/4	24CA08418	898359

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 821 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07631

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/4	24CA08418	24PR46484	18.98 x 16.78	318.48	50	TM	+ 24	≥ 360	378	≥ 460	541	≥ 24.7	35.8	≤0.93	0.70

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL1.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	WITNESSED HAVED REVIEWED SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 524 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07631 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/4	24CA08418	24PR46483	10x10x50	BLM	-50	≥ 27/27	225	229	239	231									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 844 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,74 HEAT 899516 DIMENSIONS 508 x 12,7 ITEM 50

alchemia

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU № 2133/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) **Acc. to EN 10204:2004 type 3.1**
/nr normy/ Strona Page Page Seite Страница **1/2**

(A10÷A99) **Wytwórca Stali** - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** **T.A.L**
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy**
Adresse-Address-Versandadreesse-Адрес получателя

(A07) **Nr zamówienia klienta** Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) **Nr potwierdzenia** No de la commande Manuf. Order No Werksauftragsnummer Приказ №
OF 240379	**H2400533/21/1** **148368,148369**

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	**Wymiar wyrobu** Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	**Oznaczenie stali** Désignation del'acier Steel designation Stahlbezeichnung Марка стали	**Wytop** Coulée Heat Abstich Плавка	**Sztuk** Pièces Pièces Stück Штук	**mb** ft (c. mtr.) c. mtr. 1. M. пог. м	**kg** lb (kg) кг
(B01,B03)	(B09)	(B02)	(B07)	(B08)	(B15)	(B13)
Hot rolled seamless steel pipes acc. to API 5L - PSL2 (Errata 1)/2018/ ASTM A333/A333M/18/ A999/A999M/18/ASME SA333/SA999/ SEC.II.PART.A/23/ EN 10216-3/13 - TC2. Outside diameter tolerances +/-0,75% and +/-0,5% on ends - max 1,6 mm. Outside surface grinded or shot blasting and lacquered. Pipes ultrasonic testing. Bevelled ends acc. to API-5L. Normalized 910°C/20'. Pipes hot finished >850°C and cooled in still air. Melting proces of the steel: E. Fully killed. Material free of mercury and radioactive contamination. Yield point acc. with ASME II PART D TABL.Y1. (guarantee). Raw material and end product of Polish origin. CN code: 7304 19 90	**20" x 0,500"** **(508 x 12,7 mm)** **7 - 11,5 m**	**X52N/L360N/6** **P355NL1+N**	**899516**	**6**	**69,63**	**9326**

AUREA VERITAS
ITALY
WELDED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	**C**	**Mn**	**Si**	**P**	**S**	**Cr**	**Ni**	**Cu**
heat analysis	0,14	1,25	0,21	0,008	0,003	0,05	0,06	0,10
product analysis	0,16	1,23	0,20	0,010	0,003	0,06	0,06	0,11
product analysis	0,16	1,22	0,20	0,010	0,003	0,06	0,06	0,11
(B07) **899516**	**Mo**	**V**	**Al**	**N**	**Ti**	**Nb**	**Ceq**	
heat analysis	0,04	0,06	0,031	0,007	0,000	0,001	0,39	
product analysis	0,04	0,05	0,028	0,010	0,000	0,001	0,41	
product analysis	0,04	0,05	0,028	0,010	0,000	0,001	0,40	

Approved by QUALITY1 on 08/08/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,74 HEAT 899516 DIMENSIONS 508 x 12,7 ITEM 50

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	Rt0,5 MPa 360 530	Rm MPa 460 760	A 2" % min 22,0	Z %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to ASTM A370 KV(10x10mm) (L) min 40J/-52°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость Acc. to NACE MR 0175/ ISO 15156-2/20 AN.A p. 2.1.2 and NACE MR 0103/ ISO17945/15 Pkt.13.1 MAX 22 HRC/ 237 HB (C30)	MPa min
	acc. to ASTM A370				Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B07,C02,C00) Test size: 1½"	(C11)	(C12)	(C13)	(C50-69)	(C42) mixed area	(C43)	(C31)	(C50-C69)
899516/9480	381	519	44,8		180 - 170 - 150	167	152 HB	
899516/9481	392	541	43,9				152 HB	
Longitudinal								
	acc. to EN ISO 6892-1							
	Re min 345	Rm 490 650	A5 % min 22,0		Acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-40°C			
899516/9481	388	517	28,9		115 - 108 - 100	108		
Longitudinal								

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

Guarantee grain size acc.to ASTM E 112 min. 8.
Residual magnetizm to the ends of the pipes less then 30 Gauss - guarantee

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRUFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Flattening test - positive results.

Each pipe has been hydrostatically tested by pressure 16,2 MPa - positive results time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont éte controlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destructifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)
Ultrasonic test acc. to ASTM E213 to determine longitudinal defects, ring-shaped pattern with rectangular notch acc. to ASTM E 213, the notch depth 12,5% of nominal wall thickness.

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

9482,9483,9484,9485,9486,9487

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl.

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande. - We hereby certify, that the material described above has been tested and complies with the terms of the order. - Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht. - Потверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)**Cechowanie** – Marquage – Marking –Kennzeichnung – Обозначен
Acc. to API 5 L/X52N/L360N - PSL2/A/SA333/A/SA999/6/EN 10216-3/P355NL1 - TC2.

(D51-D99)**Na podstawie wyżej przeprowadzonych prób materiał zwolniono** – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вушеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufacture Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
Specjalista z Zakresu Kontroli Jakości Renata Kuszka	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 31.07. 2024 r.

KJ 21/632

2133/2024/AH
Strona Page Page Seite Страница 2/2

BUREAU VERITAS ITALY WITNESS NOTED REVIEWED SURVEYOR P. BOTTI DATE

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Approved by QUALITY1 on 08/08/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07632 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08419	472/5	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/5	24CA08419	899516

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR E.BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07632 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/5	24CA08419	24PR46486	18.99 x 13.08	248.39	50	TM	+ 24	≥ 360 ≤ 530	363	≥ 460 ≤ 760	537	≥ 23.5	38.2	≤0.93	0.67

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALIA WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07632 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/5	24CA08419	24PR46845	10x10x55	BLM	-50	≥ 27/27	261	256	268	262									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,88 HEAT 70412 DIMENSIONS 406,4 x 25,4 ITEM 60

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 25361/3
31.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
2.119 tons - lbs	8.88 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference	PO NO. : OF210777 rev.1
Contract	**50005363**

Item	Item Client
51	-

Dimensions: 406.40 x 25.40 mm - | Schedule: - | Length: 7.00 - 9.00 m - | -

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.40	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
70412		Heat analysis		0.14	1.21	0.19	0.005	0.014	0.10	0.10	0.18	0.034	0.01	0.064	0.001	0.001	0.0002	0.0085
70412	22-590	Product analysis		0.14	1.22	0.20	0.004	0.012	0.09	0.09	0.17	0.034	0.01	0.063	0.001	0.001	0.0002	0.0083
70412	22-590	Product analysis		0.13	1.23	0.20	0.005	0.013	0.09	0.09	0.17	0.035	0.01	0.063	0.001	0.001	0.0002	0.0081

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.42	0.45
			Min	2.00	-	-	-	-	-
70412		Heat analysis		4.00	0.065	0.066	0.356	0.40	0.29
70412	22-590	Product analysis		4.10	0.064	0.065	0.335	0.39	0.27
70412	22-590	Product analysis		4.32	0.064	0.065	0.335	0.38	0.27

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 07/09/22

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,88 HEAT 70412 DIMENSIONS 406,4 x 25,4 ITEM 60

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 25361/3
31.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
2.119 tons - lbs	8.88 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable YI; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. :.OF210777 rev.1
Contract 50005363

Dimensions: 406.40 x 25.40 mm
-
Schedule: -
Length: 7.00 - 9.00 m
-
-
-

Item	Item Client
51	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
70412	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-3149	404.00	-	517.00	-	36.60	0.78
70412	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	22-3149	398.00	-	514.00	-	36.20	0.77
70412	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	22-2217	401.30	-	512.10	-	32.10	0.78

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
70412	22-4783	Longitudinal	10x10x55	-52	27.0	211	220	228	40.0	220	-	-	-	100	100	100	1.87	1.92	1.95

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
70412	22-2889	-	-	-	-	-	-	-	<20
70412	22-2889	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
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SURVEYOR F. BOTTI
DATE 26 NOV. 2024

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N° 1 MT 8,88 HEAT 70412 DIMENSIONS 406,4 x 25,4 ITEM 60

Manufacturer:
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STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
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MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
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Page 3/4
B 25361/3
31.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
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ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
2.119 tons - lbs	8.88 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference	PO NO. : OF210777 rev.1
Contract	**50005363**

Dimensions: 406.40 x 25.40 mm - Schedule: - Length: 7.00 - 9.00 m - - -

Item	Item Client
51	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
70412	22-1098	450	294.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
70412	22-4509	OK
70412	22-4509	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
70412	22-984	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
70412	1	8.88	2119

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

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Quality Control Representative

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Approved by QUALITY1 on 07/09/22

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 25361/3

31.08.2022

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
2.119 tons - lbs	8.88 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL1; ASME SA 333/SA 333M-2021; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 06/13.01.2021 with deviation as per Technical Offer no.7/26.08.2021; ASME B16.25-2017; ASME II part DTable Y1; ANSI/NACE MR 0103/ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015;

Buyer's reference: PO NO. : OF210777 rev.1

Contract 50005363

Dimensions: 406.40 x 25.40 mm
-

Schedule: -

Length: 7.00 - 9.00 m
-

-
-

Item	Item Client
51	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: L360/X52/6/P355NL1 TC1-PSL1
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source G000108.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 30 min.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 07/09/22

L.P.M. s.n.c.

Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07633 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 4

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
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In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

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Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days: after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08420	472/6	TEST COUPON FROM PIPE O.D. 406.4 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto – Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.4, THK. 25.4 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL1	472/6	24CA08420	70412

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07633

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm^2	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/6	24CA08420	24PR46488	Ø 12.41	120.96	50	TM	+ 24	≥ 360	365	≥ 460	536	≥ 20.6	35.8	≤0.93	0.68

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL1.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L.: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07633 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 4

Risultati prova di trazione attraverso lo spessore – Tensile test through the thickness results

Metodo di prova – Test method: **UNI EN 10164:2018** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT Lc	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		STRIZIONE REDUCTION OF AREA Z		
								Rp 0.2% Richiesto Required	Rp 0.2% Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required AVE./MIN.	Ottenuto Result	Media Average
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%	%
472/6	24CA08420	24PR46535	Ø 6.01	28.37	9	Z	+ 22	INFO	360	INFO	541	-	68	
472/6	24CA08420	24PR46536	Ø 6.01	28.37	9	Z	+ 22	INFO	363	INFO	549	-	72	70
472/6	24CA08420	24PR46537	Ø 5.98	28.09	9	Z	+ 22	INFO	361	INFO	551	-	70	

Note:
Note:

Legenda:
Legend:

B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; S4: SAMPLET AT 1/4 OF THE THK.
L: LONGITUDINAL; T: TRANSVERSAL; Z: THROUGH THE THICKNESS.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 224 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
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Tel. (0523) 1864011 - Fax (0523) 592744
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07633 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 4 **di** of 4

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
472/6	24CA08420	24PR46487	10x10x55	LB	-50	≥27/27	127	104	119	117	-			-	

Note – Notes: **TEST TEMPERATURE AND VALUES ACC. TO SAMPLING SHEET No. 24/122**

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: **B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 10,63 HEAT 73442 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 29617/4
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8,645 tons - lbs	42.47 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240070
Contract 50006134

Dimensions: 406.40 x 21.44 mm
-
Schedule: 80
Length: 9.00 - 11.00 m
-
-
-

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
73442		Heat analysis		0.14	1.22	0.19	0.004	0.013	0.08	0.08	0.16	0.028	0.01	0.060	0.001	0.001	0.0002	0.0075
73442	24-247	Product analysis		0.13	1.24	0.20	0.004	0.012	0.07	0.09	0.16	0.030	0.01	0.061	0.001	0.001	0.0002	0.0078
73442	24-247	Product analysis		0.14	1.23	0.19	0.004	0.012	0.07	0.08	0.15	0.030	0.01	0.061	0.001	0.001	0.0002	0.0076

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
73442		Heat analysis		3.73	0.061	0.062	0.312	0.39	0.25
73442	24-247	Product analysis		3.85	0.062	0.063	0.303	0.38	0.24
73442	24-247	Product analysis		3.95	0.062	0.063	0.293	0.39	0.23

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by S.COZZANI on 10/05/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 10,63 HEAT 73442 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 29617/4
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.645 tons - lbs	42.47 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240070
Contract 50006134

Dimensions: 406.40 x 21.44 mm - | Schedule: 80 | Length: 9.00 - 11.00 m - | - -

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
73442	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1024	396.00	-	514.00	-	37.30	0.77
73442	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1024	392.00	-	513.00	-	35.90	0.76
73442	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-523	391.10	-	515.90	-	32.10	0.76

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
73442	24-1306	Longitudinal	10x10x55	-52	27.0	164	176	169	40.0	170	-	-	-	95	95	95	1.42	1.55	1.47
73442	24-1307	Transversal	10x10x55	0	-	149	155	150	27.0	151	-	-	-	95	95	95	1.28	1.32	1.30

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
73442	24-753	-	-	-	-	-	-	-	<20
73442	24-753	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 10/05/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 10,63 HEAT 73442 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 29617/4
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.645 tons - lbs	42.47 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240070
Contract 50006134

Dimensions: 406.40 x 21.44 mm -
Schedule: 80
Length: 9.00 - 11.00 m -
- -

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI)/1000
73442	24-361	450	271.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
73442	24-981	OK
73442	24-981	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
73442	24-188	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
73442	4	42.47	8645

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 10/05/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 29617/4

30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.645 tons - lbs	42.47 meters - feets	4	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240070

Contract 50006134

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 9.00 - 11.00 m
-

-
-

Item	Item Client
5	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 26 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by S.COZZANI on 10/05/24

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07634 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08421	472/7	TEST COUPON FROM PIPE O.D. 406.4 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.4 mm WTH. 21.44 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/7	24CA08421	73442

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F.BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07634 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/7	24CA08421	24PR46490	Ø 8.65	58.77	35	TM	+ 24	≥ 360 ≤ 530	380	≥ 460 ≤ 760	528	≥ 20.6	38.0	≤0.93	0.72

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – PROV. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07634 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A.	B	C	%	mm	A	B	C	
472/7	24CA08421	24PR46489	10x10x55	BLM	-50	≥ 27/27	201	213	221	212										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 9,9 HEAT 73669 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 29731/1
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.038 tons - lbs	59.14 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240233

Contract 50006201

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-
-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
73669		Heat analysis		0.14	1.22	0.19	0.004	0.015	0.07	0.09	0.20	0.030	0.01	0.061	0.001	0.001	0.0003	0.0081
73672		Heat analysis		0.13	1.22	0.22	0.003	0.012	0.09	0.07	0.18	0.034	0.01	0.061	0.001	0.001	0.0002	0.0092
73669	24-274	Product analysis		0.14	1.24	0.20	0.004	0.013	0.07	0.09	0.19	0.033	0.01	0.061	0.001	0.001	0.0002	0.0085
73669	24-274	Product analysis		0.14	1.25	0.21	0.004	0.014	0.07	0.08	0.19	0.033	0.01	0.060	0.001	0.001	0.0002	0.0084
73672	24-270	Product analysis		0.13	1.20	0.22	0.003	0.012	0.08	0.07	0.18	0.034	0.01	0.060	0.001	0.001	0.0002	0.0090
73672	24-270	Product analysis		0.13	1.22	0.22	0.003	0.012	0.08	0.07	0.18	0.034	0.01	0.060	0.001	0.001	0.0002	0.0090

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
73669		Heat analysis		3.70	0.062	0.063	0.343	0.39	0.28
73672		Heat analysis		3.70	0.062	0.063	0.343	0.38	0.28
73669	24-274	Product analysis		3.88	0.062	0.063	0.333	0.39	0.27
73669	24-274	Product analysis		3.93	0.061	0.062	0.332	0.39	0.27
73672	24-270	Product analysis		3.78	0.061	0.062	0.332	0.38	0.27
73672	24-270	Product analysis		3.78	0.061	0.062	0.332	0.38	0.27

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by S.COZZANI on 14/05/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 9,9 HEAT 73669 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

Page 2/4
B 29731/1
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.038 tons - lbs	59.14 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240233
Contract 50006201

Dimensions: 406.40 x 21.44 mm - Schedule: 80 - Length: 8.00 - 10.00 m - -

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
73669	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-998	395.00	-	514.00	-	37.20	0.77
73669	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-998	391.00	-	512.00	-	35.90	0.76
73669	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-506	393.60	-	513.40	-	32.90	0.77
73672	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-998	393.00	-	515.00	-	36.60	0.76
73672	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-998	396.00	-	516.00	-	37.30	0.77
73672	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-506	391.10	-	514.60	-	32.10	0.76

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
73669	24-1268	Longitudinal	10x10x55	-52	27.0	187	202	196	40.0	195	-	-	-	95	100	95	1.66	1.80	1.74
73669	24-1269	Transversal	10x10x55	0	-	179	185	176	27.0	180	-	-	-	95	95	95	1.57	1.64	1.54
73672	24-1268	Longitudinal	10x10x55	-52	27.0	208	182	189	40.0	193	-	-	-	100	95	95	1.84	1.61	1.68
73672	24-1269	Transversal	10x10x55	0	-	190	178	182	27.0	183	-	-	-	95	95	95	1.70	1.56	1.60

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR E. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by S.COZZANI on 14/05/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 9,9 HEAT 73669 DIMENSIONS 406,4 x 21,44 ITEM 70

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 29731/1
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.038 tons - lbs	59.14 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO.NO. : OF240233

Contract 50006201

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
73669	24-735	-	-	-	-	-	-	-	<20
73669	24-735	-	-	-	-	-	-	-	<20
73672	24-735	-	-	-	-	-	-	-	<20
73672	24-735	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
73669	24-346	450	268.40	-
73672	24-346	450	267.40	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
73669	24-959	OK
73669	24-959	OK
73672	24-959	OK
73672	24-959	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
73669	24-178	0	9
73672	24-178	0	9

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Formular 12A rev.9

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Approved by S.COZZANI on 14/05/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 29731/1
30.04.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.038 tons - lbs	59.14 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240233
Contract 50006201

Dimensions: 406.40 x 21.44 mm
-

Schedule: 80

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
73669	3	29.69	6043
73672	3	29.45	5995

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA.
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 26 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
~~APPROVED NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by S.COZZANI on 14/05/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07635 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08422	472/8	TEST COUPON FROM PIPE O.D. 406.4 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.4 mm WTH. 21.44 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/8	24CA08422	73669

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07635 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/8	24CA08422	24PR46492	Ø 8.67	59.04	35	TM	+ 24	≥ 360 ≤ 530	380	≥ 460 ≤ 760	525	≥ 20.6	38.9	≤0.93	0.72

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07635 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/8	24CA08422	24PR46491	10x10x55	BLM	-50	≥ 27/27	115	106	115	112									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C. TAL JOB N°324002472
N° 1 MT 11,63 HEAT 818906 DIMENSIONS 406,4 x 15,88 ITEM 80

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/3
B 30405/1
19.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.779 tons - lbs	11.63 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240375
Contract 50006282

Dimensions: 406.40 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
37	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
818906		Heat analysis		0.14	1.21	0.19	0.002	0.012	0.04	0.07	0.08	0.031	0.01	0.068	0.002	0.002	0.0001	0.0075
818906	24-498	Product analysis		0.15	1.23	0.21	0.002	0.010	0.04	0.06	0.07	0.034	0.01	0.066	0.001	0.002	0.0001	0.0076
818906	24-498	Product analysis		0.15	1.22	0.21	0.002	0.011	0.04	0.06	0.07	0.034	0.01	0.067	0.001	0.002	0.0001	0.0077

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
818906		Heat analysis		4.13	0.070	0.072	0.202	0.38	0.13
818906	24-498	Product analysis		4.47	0.067	0.069	0.189	0.39	0.12
818906	24-498	Product analysis		4.42	0.068	0.070	0.190	0.39	0.12

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm^2	$inch^2$							
818906	Longitudinal Flat	50.8	-	40.00	-	17.10	-	684.0	-	24-1938	423.00	-	533.00	-	44.40	0.79
818906	Longitudinal Flat	-	-	20.00	-	16.70	-	334.0	-	24-1082	421.00	-	529.00	-	41.30	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Formular 12A rev.9

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Approved by S.COZZANI on 02/09/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,63 HEAT 818906 DIMENSIONS 406,4 x 15,88 ITEM 80

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/3
B 30405/1
19.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.779 tons - lbs	11.63 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240375
Contract 50006282

Dimensions: 406,40 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
37	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %.			Lateral Expansion min. mm		
818906	24-2514	Longitudinal	10x10x55	-52	28.0	176	158	169	40.0	168	-	-	-	95	95	95	1.54	1.38	1.48
818906	24-2515	Transversal	10x10x55	0	-	165	152	156	27.0	158	-	-	-	95	95	95	1.43	1.31	1.35

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
818906	24-1482	-	-	-	-	-	-	-	<20
818906	24-1482	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
818906	24-744	450	291.90	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
818906	24-1876	OK

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
818906	24-427	0	9

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,63 HEAT 818906 DIMENSIONS 406,4 x 15,88 ITEM 80

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/3
B 30405/1
19.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.779 tons - lbs	11.63 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240375

Contract 50006282

Dimensions: 406.40 x 15.88 mm
-

Schedule: -

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
37	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
818906	1	11.63	1779

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 19 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev.9

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Approved by S.COZZANI on 02/09/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07636 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08423	472/9	TEST COUPON FROM PIPE O.D. 406.4 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 406.4 mm WTH. 15.88 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/9	24CA08423	818906

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07636 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/9	24CA08423	24PR46494	19.03 x 15.81	300.86	50	TM	+ 24	≥ 360 ≤ 530	380	≥ 460 ≤ 760	523	≥ 24.4	41.0	≤0.93	0.73

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07636 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA				ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/9	24CA08423	24PR46493	10x10x55	BLM	-50	≥ 27/27	305	298	316	306									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALIA WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 10,09 HEAT 1243874 DIMENSIONS 323,8 x 12,7 ITEM 110

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
м.Нікополь, пр.Трубників, 56
Тел./факс +38(0566)639-379LLC "INTERPIPE NIKO TUBE", UKRAINE,
Nikopol, 56, Trubnikov ave.
Tel./fax +38(0566)639-379

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C10747 (A03)
Аркуш / Page 1
Аркушів / Pages 5
Дата / Data 08.10.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico - Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # (A07) COC24/2025
	Заводське замовлення/Production order # (A08) 24-008079
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) OF240504
Транспортний засіб/ Vehicle № KA2256KX/AA8629XG	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Розміри згідно стандарту ASME B36.10M-2022./Dimensions and weights according to ASME B36.10M-2022.
Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice.
Завод сертифікований за PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Твердість відповідає вимогам ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)/Hardness meets the requirements of ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)
Система менеджменту якості виробника сертифікована за ISO 9001:2015, сертифікат № 20100223014373/00, виданий компанією TUV AUSTRIA CERT GMBH, дійсний до 2025-06-06 ./ The manufacturer's quality management system is certified according to ISO 9001:2015 certificate No: 20100223014373/00 issued by TUV AUSTRIA CERT GMBH, valid until 2025-06-06.
Замовлення базується на вимогах специфікації TS 01 REV.08 13 JULY 2023 та листа відхилення до неї./Order based on requirements specification TS 01 REV.08 13 JULY 2023 and deviation sheet for it.
Сталь, розкислена алюмінієм та вироблена згідно технології виготовлення дрібнозернистої сталі./Steel deoxidized with aluminum and produced according to fine-grain manufacturing technology steel.
Залишковий магнетизм не більше 30 Gs./The residual magnetism of less than 30 Gs.
Труби відповідають стандарту ASME для котлів і посудини під тиском, розділ II, частина D, таблиця Y-1./Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Труби не містять радіаційні елементи./ Pipes do not contain radiation elements.
Величина зерна max 7 балів відповідно ASTM E112./Grain size of max 7 points ASTM E112.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 880 С... 1000 град С., охолодження на повітрі.
/Pipes produced by Hot Forming followed by normalizing at the temperature 880 deg C to 1000 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD мм mm	(B09) Товщина стінки WT мм mm	(B010) Довжина Length м m	(B11) Загальна довжина Total length м m	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross кг kg	(B13) нетто net кг kg
1	NK24-VR2-48448		1243874	4700	323.8	12.70	10.00-11.80	20,28	2	1968	1963
			NPS 12	Sch XS		РАЗОМ/TOTAL		20,28	2	1968	1963
						ПАКУНКІВ/BUNDLES 1					
					Супроводний дерев'яний пакувальний матеріал / Accompanying packaging wooden material					16	
							РАЗОМ ВАНТАЖ/TOTAL CARGO	20,28	2	1984	1963

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

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Approved by QUALITY1 on 15/10/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 10,09 HEAT 1243874 DIMENSIONS 323,8 x 12,7 ITEM 110

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24C10747 (A03)
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Дата / Data 08.10.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV x100	1	2
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-			
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	43	0,11	0,15
1243874	14.1	124	19.9	2	12	9.4	11.1	19.9	10	3	64	2	29	0.4	4.4	40	0.07	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% -- 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV x100	1	2
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-			
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	43	0,11	0,15
1243874		1	16	127	21	4	14	9	10	20	10	2	62	1	30	0.3	7	42	0.06	0.07
		2	15	127	21	3	14	9	10	20	10	2	62	1	30	0.3	7	41	0.06	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti

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N° 1 MT 10,09 HEAT 1243874 DIMENSIONS 323,8 x 12,7 ITEM 110

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24C10747 (A03)
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Дата / Data 08.10.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 25	(C13) Відносне подовження Elongation 25 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0.93				
1243874	4700	565	-	402	-	29,5	-	-	-	0,71	L		5	25

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 35	(C13) Відносне подовження Elongation 35 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	14,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	0.93				
1243874	4700	560	-	415	-	31,0	-	-	-	0,74	L		8.9	35
1243874	4700	570	-	425	-	32,0	-	-	-	0,75	L		8.9	35

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

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WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
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N° 1 MT 10,09 HEAT 1243874 DIMENSIONS 323,8 x 12,7 ITEM 110

INTERPIPE NIKO TUBE

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INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No.: 24C10747 (A03)
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Дата / Data 08.10.2024

Випробування на удар/Impact test ASTM A370/ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1243874	4700	L	KV -45°C	18	125	125	148	132,7		10x10
1243874	4700	T	KV 0°C	27	266	279	203	249,3		10x10

Випробування на удар/Impact test ISO 148-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1243874	4700	T	KV -40°C	27	134	175	139	149,3		10x7.5
1243874	4700	T	KV -52°C	28	119	132	139	130,0		10x7.5

* L - поздовжній зразок/Longitudial spesimen; **T** - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки	(B07.2) Номер партії	HRB (C31.1) 1	(C31.1) 2	(C31.1) 3	(C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	(C31.3) 2	(C31.3) 3	(C31.3) ср.знач./av.	HV (C31.4) 1	(C31.4) 2	(C31.4) 3	(C31.4) 4	(C32.4) ср.знач./av.
Heat #	Lot #														
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1243874	4700	86	87	87	87	<22	-	-	-	-	-	-	-	-	-
1243874	4700	88	86	88	87	<22	-	-	-	-	-	-	-	-	-

Металографічні випробування / Metallurgical tests

(B07.1) Номер плавки Heat #	(C00.1) Номер партії Lot #	Малюнок Figure	Полосчатость Striation	Відманштет Vidmanshtett	Нітриди і карбонітриди точкові / строчечного Nitrides and carbonitrides of Tispot/stitch	Величина зерна Grain size номер/number 1		2		3	
		бал/points	бал/points	бал/points	бал/points						
min		-	-	-	-	7		7		7	
max		-	-	-	-	-		-		-	
1243874	4700	-	-	-	-	8,0	8,0	-	-	-	-

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~~APPROVED~~ ~~NOTED~~ REVIEWED
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(C50,D55)
Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	100% / 20.5 MPa/ 10 sec	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-3./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-3.	100%	Задовільно / Satisfactory
Контроль кінців труб/ SEA inspectio	Неконтрольовані кінці труб обрізані./Non-inspected ends are cutted.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B05)
Маркування фарбою/ Marking paint

{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 323,8 12,7 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 12 XS HF LT -52C {отметка приемщика} COC24/2025 S 65.48 {Тип покрытия}

(A04,B05)
Маркування клеймами/ Dot marking

{HEAT}

(Z01)
Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements.

(A05,Z02,Z03)

Дата/Data	
08.10.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Сокур М.М./Sokur M.N .
INTERPIPE E5	

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 15/10/24

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07637 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

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All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08424	472/10	TEST COUPON FROM PIPE O.D. 323.8 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 323.8 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/10	24CA08424	1243874

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR 26 NOV. 2024 DATE	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07637 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION Ef		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/10	24CA08424	24PR46496	18.98 x 13.26	251.67	50	TM	+ 24	≥ 360 ≤ 530	436	≥ 460 ≤ 760	569	≥ 23.5	29.4	≤0.93	0.77

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

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RAPPORTO DI PROVA
TEST REPORT

24RP07637 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/10	24CA08424	24PR46495	10x10x55	BLM	-50	≥ 27/27	93	91	91	92									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 4 MT 47,1 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 170

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ИНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубников,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
Контактна інформація: +38(0562)35-85-07,quality@m.interpipe.biz
LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
Legal address: Trubnykiv Av.,56,Nikopol,Ukraine,53200
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Contact information: +38(0562)35-85-07,quality@m.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 1/5
Дата / Data 13.06.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # COC24/0868
	Заводське замовлення/Production order # (A08) 640868/101
Країна/ Country (A06.1) Італія/Italy	№ замовлення клієнта/ Customers ref # (A07) PO#OF240243
Транспортний засіб/ Vehicle № AX 3685BO/AX4404XT	Унікальний №/ Unique # 24-003469 (A09)

(B01,B02,B03) Стан постачання / Dellivery condition Нормалізовані / Normalized condition	Труби сталеві безшовні гарячекатані для нафтогазапроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби з фаскою. Обрізка кінців згідно ASME B 16.25 фігура 2A / Pipes will be delivered with beveled ends. BE according to ASME B 16.25, fig. 2A.
	Труби із пластиковими протекторами / Pipes with plastic protectors.
	Труби покриті чорним лаком / Pipes are coated with black varnish

Додаткова інформація/Additional information
Маса фактична. / Actual weight.
Завод сертифікований по PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сертифікований ТЮФ Тюринген за AD2000 Merkblatt W4 including paragraph 7, February 2013 та за Директивою 2014/68/EU для ємностей високого тиску; реєстраційний номер сертифікаційного центру 0090. Сертифікат відповідності на систему управління якістю № 31102006 QM15. / Approved acc. to AD2000 Merkblatt W4 including paragraph 7, February 2013 and certified acc. to Pressure Equipment Directive 2014/68/EU by TUV Thuringen e.V.; notified body, reg.-no.0090. Conformance Certificate on Quality Management System № 31102006 QM15.
Без травлення/ Pipes without etching.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилень до неї/The order is based on the requirements of the TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Труби відповідають вимогам ASME для котлів та ємностей під тиском, розділ II, частина D, таблиця Y-1. / Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Країна виплавки та виробництва - Україна./Country of melt and manufacturer UKRAINE.
Процес виробництва сталі: електросталеплавильне виробництво./ Steel making process: Electric Arc Furnace.
Твердість відповідає вимогам ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015 / Hardness acc. to ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015.
Сталь спокійна дрібнозерниста. / Steel is fully Killed and made to fine grain practice.
Вироби піддалися візуальному огляду та контролю розмірів / visual and dimensional test is satisfactory.
Розміри згідно стандарту ASME B36.10M/ Dimensions and weights according to ASME B36.10M.
Відповідність ASME II part.D Tab. Y1/ Compliance with ASME II part.D Tab. Y1.
Сталь, розкислена алюмінієм і виготовлена згідно з технологією виготовлення дрібнозернистої сталі/Steel is Fully Aluminum Killed and made to fine grain practice.
Підтвердження Системи управління контролем якості (QAM) згідно з ISO 9001/Quality Assurance Management (QAM) System Validation according to ISO 9001.
Труби не містять радіаційні елементи./Pipes do not contain radiation elements.

Термообробка/Heat treatment
Нормалізація або нормалізаційна деформація здійснюється при тем-ре 880 грС–1000 грС з наступним охолодженням на повітрі / Normalization or normalization deformation is carried out at a temperature of 880 °C–1000 °C, followed by cooling in air

BUREAU VERITAS
ITAPY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 4 MT 47,1 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 170

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
"ИНТЕРПАЙП НИКО ТЬЮБ"
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 2/5
Дата / Data 13.06.2024

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	27	10683	1241673	2394	273.0	12.70	10.00-11.80	11,74	1	964	954
2	39	10656	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	958	948
3	40	10679	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	964	954
4	41	10657	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
5	42	10659	1241674	2393	273.0	12.70	10.00-11.80	11,61	1	940	930
6	43	10655	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
7	44	10660	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	954	944
8	33	10666	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
9	34	10663	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	956	946
10	35	10675	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	950	940
11	36	10673	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	956	948
12	37	10658	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	944	934
13	38	10678	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
14	26	10676	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	948	938
15	28	10664	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	968	958
16	30	10677	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	950	940
17	31	10668	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	968	958
18	32	10669	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	962	952
19	22	10671	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	960	950
20	23	10662	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
21	24	10672	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
22	25	10674	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	954	944
		For item/поз.: # 24-003469-011		NPS 10	Sch 60 XS	РАЗОМ/TOTAL		258,58	22	21074	20854
						ПАКУНКІВ/BUNDLES 22					
						Супровідний дерев'яний пакувальний матеріал / Accompanying packaging wooden material			56		
						РАЗОМ ВАНТАЖ/TOTAL CARGO		258,58	22	21130	20854

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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N° 4 MT 47,1 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 170

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(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 3/5
Дата / Data 13.06.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241673	14.3	122.1	17.3	5	15	10.2	12.8	23.2	13	2	67	2	26	0.5	6.3	0.41
1241674	14.8	122.8	19	5	14	10.2	11.4	22.9	11	2	65	2	29	0.5	6.3	0.41

CEV	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/ Plant-manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test. piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241674	2393	1	15	123	19	5	12	10	11	23	10	2	64	1	28	0,4	7	41
1241673	2394	2	16	122	17	5	15	10	12	22	12	1	68	1	27	0,5	9	42

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності R10.5 Yield strength R10.5	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 50.8	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490		360		14				-				
max		650		530						-				
1241673	2394	565		410		36					L		8.9	35
		570		405		35					L		8.9	35

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 4 MT 47,1 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 170

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ІНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубників,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
Контактна інформація: +38(0562)35-85-07,quality@m.interpipe.biz
LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
Legal address: Trubnykiv Av.,56,Nikopol,Ukraine,53200
Facility address: Kashtanova Str.,35,Dnipro,Ukraine,49081
Contact information: +38(0562)35-85-07,quality@m.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 4/5
Дата / Data 13.06.2024

1241674	2393	565		420		32,0					L		8,9	35
		575		425		32,0					L		8,9	35

Випробування на розтягнення/ Tensile test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності Rp0,2 Yield strength Rp0,2	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 90	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460		355		22				-				
max		760								-				
1241673	2394	565		409		29					L		5	25
1241674	2393	597		438		27					L		5	25

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

Випробування на удар/Impact test API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	L	KV -45°C	18	122	87	107	105		10x10
1241673	2394	T	KV -0°C	27	172	177	194	181		10x10
1241674	2393	L	KV -45°C	18	99	95	114	103		10x10
1241674	2393	T	KV -0°C	27	176	181	175	177		10x10

Випробування на удар/Impact test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	T	KV -52°C	28	133	117	106	119		7.5x10
			KV -52°C	28	143	132	142	139		7.5x10

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 26 NOV. 2024

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Approved by QUALITY1 on 25/06/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 4 MT 47,1 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 170

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
"ИНТЕРПАЙП НИКО ТЬЮБ"
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 5/5
Дата / Data 13.06.2024

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющення/ Flattening test	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Кільцеве розтягнення/ Ring tensile	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 20.5 MPa / 10 sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length body	Неруйнівний ультразвуковий контроль. Поздовжній розмір надрізу 12,5% на зовнішній та внутрішній поверхні / Nondestructive ultrasonic test. Longitudinal notch with depth 12,5% on external and internal surface	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Остаточний магнетизм/The residual magnetism	не більше 30 Гс/of less than 30 Gs	100%	Задовільно / Satisfactory
Розмір зерна/Grain size	Не більше 7.0 балів (р-р зерна: 8.0)/ Is no more than 7.0 (grain size: 8.0)	100%	Задовільно / Satisfactory

(Z01)
Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
13.06.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Іваненко Дарина Андріївна/Ivanenko Darina

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38(056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

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Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

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All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08425	472/11	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/11	24CA08425	1241674

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY PASSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
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http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/11	24CA08425	24PR46498	18.92 x 12.26	231.96	50	LM	+ 24	≥ 360 ≤ 530	411	≥ 460 ≤ 760	561	≥ 23.1	33.2	≤0.93	0.73

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALIA WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/11	24CA08425	24PR46497	10x10x55	BLM	-50	≥ 27/27	111	117	125	118										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 NOV 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

Page 1/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
489144		Heat analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0067
489145		Heat analysis		0.14	1.23	0.20	0.002	0.010	0.06	0.05	0.05	0.024	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292		Heat analysis		0.14	1.24	0.21	0.002	0.014	0.02	0.02	0.01	0.032	0.00	0.070	0.002	0.002	0.0005	0.0038
489144	24-700	Product analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0068
489144	24-700	Product analysis		0.14	1.23	0.20	0.004	0.010	0.06	0.05	0.05	0.026	0.01	0.069	0.003	0.003	0.0001	0.0065
489145	24-699	Product analysis		0.14	1.24	0.20	0.002	0.010	0.06	0.05	0.05	0.025	0.01	0.066	0.003	0.003	0.0001	0.0066
489145	24-699	Product analysis		0.14	1.25	0.21	0.002	0.010	0.06	0.05	0.05	0.026	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292	24-587	Product analysis		0.14	1.23	0.20	0.002	0.010	0.02	0.02	0.01	0.031	0.00	0.070	0.002	0.002	0.0005	0.0036
2403292	24-587	Product analysis		0.15	1.24	0.21	0.002	0.010	0.02	0.02	0.01	0.032	0.00	0.069	0.002	0.002	0.0005	0.0038

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 12 MT 140,14 HEAT 489144 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
489144		Heat analysis		3.73	0.070	0.073	0.183	0.37	0.11
489145		Heat analysis		3.48	0.068	0.071	0.191	0.38	0.12
2403292		Heat analysis		8.42	0.072	0.074	0.104	0.37	0.03
489144	24-700	Product analysis		3.68	0.070	0.073	0.183	0.37	0.11
489144	24-700	Product analysis		4.00	0.072	0.075	0.195	0.38	0.12
489145	24-699	Product analysis		3.79	0.069	0.072	0.192	0.38	0.12
489145	24-699	Product analysis		3.77	0.068	0.071	0.191	0.38	0.12
2403292	24-587	Product analysis		8.61	0.072	0.074	0.104	0.37	0.03
2403292	24-587	Product analysis		8.42	0.071	0.073	0.103	0.38	0.03

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY
UNDISCLOSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 12 MT 140,14 HEAT 489144 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
489144	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	24-2620	416.00	-	525.00	-	41.30	0.79
489144	Longitudinal Flat	50.8	-	40.00	-	13.50	-	540.0	-	24-2620	418.00	-	527.00	-	41.70	0.79
489144	Longitudinal Flat	-	-	20.00	-	13.60	-	272.0	-	24-1463	418.00	-	529.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.40	-	536.0	-	24-2620	417.00	-	525.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	24-2620	421.00	-	530.00	-	42.30	0.79
489145	Longitudinal Flat	-	-	20.00	-	13.10	-	262.0	-	24-1463	415.30	-	523.30	-	39.90	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	24-2620	415.00	-	526.00	-	41.40	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	24-2620	420.00	-	531.00	-	42.40	0.79
2403292	Longitudinal Flat	-	-	20.00	-	13.30	-	266.0	-	24-1463	416.20	-	526.30	-	40.10	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
489144	24-3420	Transversal	10x10x55	0	-	204	218	189	27.0	204	-	-	-	100	100	95	1.82	1.92	1.70
489144	24-3421	Longitudinal	10x10x55	-52	28.0	235	215	201	40.0	217	-	-	-	100	100	100	1.98	1.87	1.79
489145	24-3420	Transversal	10x10x55	0	-	195	181	216	27.0	197	-	-	-	95	95	100	1.74	1.62	1.91
489145	24-3421	Longitudinal	10x10x55	-52	28.0	206	221	190	40.0	206	-	-	-	100	100	95	1.83	1.93	1.70
2403292	24-3420	Transversal	10x10x55	0	-	178	193	207	27.0	193	-	-	-	95	95	100	1.61	1.72	1.84
2403292	24-3421	Longitudinal	10x10x55	-52	28.0	197	211	228	40.0	212	-	-	-	95	100	100	1.76	1.87	1.96

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

Formular 12A rev.9

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Approved by QUALITY1 on 06/11/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 12. MT 140,14 HEAT 489144 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
489144	24-2033	-	-	-	-	-	-	-	<20
489144	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 6 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A, rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 12 MT 140,14 HEAT 489144 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - -

Item	Item Client
12	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
489144	24-1003	450	283.70	-
489145	24-1003	450	281.10	-
2403292	24-1003	450	279.20	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
489144	24-2512	OK
489144	24-2512	OK
489145	24-2512	OK
489145	24-2512	OK
2403292	24-2512	OK
2403292	24-2512	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
489144	24-645	0	9
489145	24-645	0	9
2403292	24-645	0	9

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 06/11/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA.G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
489144	13	151.74	9808
489145	3	35.06	2266
2403292	1	11.78	761

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 14 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07639 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08426	472/12	TEST COUPON FROM PIPE O.D. 219.1 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/12	24CA08426	489144

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07639 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/12	24CA08426	24PR46500	19.03 x 13.56	258.05	50	LM	+ 24	≥ 360 ≤ 530	367	≥ 460 ≤ 760	503	≥ 23.6	39.8	≤0.93	0.73

REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR PAROTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07639 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/12	24CA08426	24PR46499	10x10x55	BLM	-50	≥ 27/27	346	325	333	335									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F.BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
489144		Heat analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0067
489145		Heat analysis		0.14	1.23	0.20	0.002	0.010	0.06	0.05	0.05	0.024	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292		Heat analysis		0.14	1.24	0.21	0.002	0.014	0.02	0.02	0.01	0.032	0.00	0.070	0.002	0.002	0.0005	0.0038
489144	24-700	Product analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0068
489144	24-700	Product analysis		0.14	1.23	0.20	0.004	0.010	0.06	0.05	0.05	0.026	0.01	0.069	0.003	0.003	0.0001	0.0065
489145	24-699	Product analysis		0.14	1.24	0.20	0.002	0.010	0.06	0.05	0.05	0.025	0.01	0.066	0.003	0.003	0.0001	0.0066
489145	24-699	Product analysis		0.14	1.25	0.21	0.002	0.010	0.06	0.05	0.05	0.026	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292	24-587	Product analysis		0.14	1.23	0.20	0.002	0.010	0.02	0.02	0.01	0.031	0.00	0.070	0.002	0.002	0.0005	0.0036
2403292	24-587	Product analysis		0.15	1.24	0.21	0.002	0.010	0.02	0.02	0.01	0.032	0.00	0.069	0.002	0.002	0.0005	0.0038

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
489144		Heat analysis		3.73	0.070	0.073	0.183	0.37	0.11
489145		Heat analysis		3.48	0.068	0.071	0.191	0.38	0.12
2403292		Heat analysis		8.42	0.072	0.074	0.104	0.37	0.03
489144	24-700	Product analysis		3.68	0.070	0.073	0.183	0.37	0.11
489144	24-700	Product analysis		4.00	0.072	0.075	0.195	0.38	0.12
489145	24-699	Product analysis		3.79	0.069	0.072	0.192	0.38	0.12
489145	24-699	Product analysis		3.77	0.068	0.071	0.191	0.38	0.12
2403292	24-587	Product analysis		8.61	0.072	0.074	0.104	0.37	0.03
2403292	24-587	Product analysis		8.42	0.071	0.073	0.103	0.38	0.03

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - -

Item	Item Client
12	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
489144	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	24-2620	416.00	-	525.00	-	41.30	0.79
489144	Longitudinal Flat	50.8	-	40.00	-	13.50	-	540.0	-	24-2620	418.00	-	527.00	-	41.70	0.79
489144	Longitudinal Flat	-	-	20.00	-	13.60	-	272.0	-	24-1463	418.00	-	529.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.40	-	536.0	-	24-2620	417.00	-	525.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	24-2620	421.00	-	530.00	-	42.30	0.79
489145	Longitudinal Flat	-	-	20.00	-	13.10	-	262.0	-	24-1463	415.30	-	523.30	-	39.90	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	24-2620	415.00	-	526.00	-	41.40	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	24-2620	420.00	-	531.00	-	42.40	0.79
2403292	Longitudinal Flat	-	-	20.00	-	13.30	-	266.0	-	24-1463	416.20	-	526.30	-	40.10	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
489144	24-3420	Transversal	10x10x55	0	-	204	218	189	27.0	204	-	-	-	100	100	95	1.82	1.92	1.70
489144	24-3421	Longitudinal	10x10x55	-52	28.0	235	215	201	40.0	217	-	-	-	100	100	100	1.98	1.87	1.79
489145	24-3420	Transversal	10x10x55	0	-	195	181	216	27.0	197	-	-	-	95	95	100	1.74	1.62	1.91
489145	24-3421	Longitudinal	10x10x55	-52	28.0	206	221	190	40.0	206	-	-	-	100	100	95	1.83	1.93	1.70
2403292	24-3420	Transversal	10x10x55	0	-	178	193	207	27.0	193	-	-	-	95	95	100	1.61	1.72	1.84
2403292	24-3421	Longitudinal	10x10x55	-52	28.0	197	211	228	40.0	212	-	-	-	95	100	100	1.76	1.87	1.96

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 06/11/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 4/7 **B 30793/2** **28.10.2024**	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 12.835 tons - lbs	Total Length: 198.58 meters - feets	Pieces 17	Bundles 4
Buyer's reference PO NO. : OF240711 **Contract 50006436**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;				
	Dimensions: 219.08 x 12.70 mm -	Schedule: XS/80	Length: 10.00 - 11.80 m -	-	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
12	-		205	-	20.5	10	-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
489144	24-2033	-	-	-	-	-	-	-	<20
489144	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm
-
Schedule: XS/80
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
489144	24-1003	450	283.70	-
489145	24-1003	450	281.10	-
2403292	24-1003	450	279.20	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
489144	24-2512	OK
489144	24-2512	OK
489145	24-2512	OK
489145	24-2512	OK
2403292	24-2512	OK
2403292	24-2512	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
489144	24-645	0	9
489145	24-645	0	9
2403292	24-645	0	9

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 06/11/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,6 HEAT 489145 DIMENSIONS 219,1 x 12,7 ITEM 140

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
489144	13	151.74	9808
489145	3	35.06	2266
2403292	1	11.78	761

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 7/7 B 30793/2 28.10.2024	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 12.835 tons - lbs	Total Length: 198.58 meters - feets	Pieces 17 / Bundles 4
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
Buyer's reference PO NO. : OF240711	Dimensions: 219.08 x 12.70 mm -		Schedule: XS/80			Length: 10,00 - 11.80 m -	- -	
Contract 50006436								

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
12	-		205	-	20.5	10	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 14 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR R. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07640 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	**Descrizione –** Description
24CA08427	472/13	TEST COUPON FROM PIPE O.D. 219.1 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/13	24CA08427	489145

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore –** Inspector	**Resp. Lab. –** Lab. Manager	**Approvato da –** Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07640 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/13	24CA08427	24PR46502	19.08 x 13.23	252.43	50	LM	+ 24	≥ 360 ≤ 530	377	≥ 460 ≤ 760	513	≥ 23.5	40.2	≤0.93	0.73

REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
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e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07640 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/13	24CA08427	24PR46501	10x10x55	BLM	-50	≥ 27/27	375	348	358	360										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 21,49 HEAT 819236 DIMENSIONS 219,1 x 10,31 ITEM 150

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 30454/1
31.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.141 tons - lbs	21.49 meters - feets	2	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 219.08 x 10.31 mm
-

Schedule: 60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
26	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
819236		Heat analysis		0.14	1.22	0.18	0.005	0.009	0.06	0.07	0.08	0.025	0.01	0.080	0.002	0.002	0.0005	0.0100
819236	24-512	Product analysis		0.14	1.25	0.20	0.005	0.008	0.05	0.06	0.07	0.028	0.01	0.077	0.001	0.002	0.0003	0.0097
819236	24-512	Product analysis		0.15	1.25	0.20	0.005	0.008	0.05	0.06	0.07	0.027	0.01	0.077	0.001	0.002	0.0003	0.0096

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
819236		Heat analysis		2.50	0.082	0.084	0.234	0.38	0.15
819236	24-512	Product analysis		2.89	0.078	0.080	0.210	0.38	0.13
819236	24-512	Product analysis		2.81	0.078	0.080	0.210	0.39	0.13

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 13/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 30454/1

31.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.141 tons - lbs	21.49 meters - feets	2	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2.-2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 219.08 x 10.31 mm
-

Schedule: 60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
26	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
819236	Longitudinal Flat	50.8	-	40.00	-	11.20	-	448.0	-	24-2043	416.00	-	518.00	-	41.20	0.80
819236	Longitudinal Flat	50.8	-	40.00	-	10.70	-	428.0	-	24-2043	413.00	-	516.00	-	40.80	0.80
819236	Longitudinal Flat	-	-	20.00	-	10.80	-	216.0	-	24-1149	412.00	-	515.30	-	38.60	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T.°C			Shear Area min. %			Lateral Expansion min. mm		
819236	24-2658	Transversal	10x7.5x55	0	-	128	143	152	20.0	141	-	-	-	90	95	95	1.12	1.26	1.35
819236	24-2659	Longitudinal	10x7.5x55	-52	21.0	158	171	146	30.0	158	-	-	-	95	95	95	1.41	1.53	1.29

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
819236	24-1564	-	-	-	-	-	-	-	<20
819236	24-1564	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 13/09/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 21,49 HEAT 819236 DIMENSIONS 219,1 x 10,31 ITEM 150

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30454/1
31.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.141 tons - lbs	21.49 meters - feets	2	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 219.08 x 10.31 mm
-
Schedule: 60
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
26	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
819236	24-802	450	267.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
819236	24-1976	OK
819236	24-1976	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
819236	24-482	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
819236	2	21.49	1141

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR 26 NOV 2024
DATE

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 13/09/24

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL. 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 30454/1 31.08.2024	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 1.141 tons - lbs	Total Length: 21.49 meters - feets	Pieces 2	Bundles 1
Buyer's reference PO NO. : OF240574	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;				
Contract 50006380	Dimensions: 219.08 x 10.31 mm -	Schedule: 60	Length: 10.00 - 11.80 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
26	-		205	-	20.5	10	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 7 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 13/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07641 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	**Descrizione –** Description
24CA08428	472/14	TEST COUPON FROM PIPE O.D. 219.1 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 10.31 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/14	24CA08428	819236

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore –** Inspector	**Resp. Lab. –** Lab. Manager	**Approvato da –** Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07641

Data Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/14	24CA08428	24PR46504	18.86 x 10.66	201.05	50	LM	+ 24	≥ 360 ≤ 530	393	≥ 460 ≤ 760	520	≥ 22.5	38.2	≤0.93	0.76

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 804 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07641 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/14	24CA08428	24PR46503	10x10x55	BLM	-50	≥ 27/27	227	222	210	220									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV 2024	E. FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,56 HEAT 2403294 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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B 30638/7
08.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
0.492 tons - lbs	11.56 meters - feets	1	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
2403294		Heat analysis		0.15	1.30	0.20	0.001	0.015	0.02	0.02	0.01	0.030	0.00	0.068	0.001	0.002	0.0005	0.0038
2403294	24-593	Product analysis		0.15	1.30	0.20	0.001	0.015	0.01	0.02	0.01	0.029	0.00	0.068	0.001	0.002	0.0005	0.0036
2403294	24-593	Product analysis		0.15	1.29	0.20	0.001	0.015	0.01	0.02	0.01	0.030	0.00	0.067	0.001	0.002	0.0005	0.0034

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
2403294		Heat analysis		7.89	0.069	0.071	0.098	0.39	0.03
2403294	24-593	Product analysis		8.06	0.069	0.071	0.091	0.38	0.02
2403294	24-593	Product analysis		8.82	0.068	0.070	0.090	0.38	0.02

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 10/10/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,56 HEAT 2403294 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

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08.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
0.492 tons - lbs	11.56 meters - feets	1	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - -

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
2403294	Longitudinal Flat	50.8	-	40.00	-	12.20	-	488.0	-	24-2238	421.00	-	531.00	-	43.30	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.90	-	476.0	-	24-2238	418.00	-	529.00	-	42.90	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	24-2238	420.00	-	532.00	-	43.20	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.60	-	464.0	-	24-2238	417.00	-	526.00	-	42.50	0.79
2403294	Longitudinal Flat	-	-	20.00	-	12.10	-	242.0	-	24-1258	419.00	-	530.20	-	41.10	0.79
2403294	Longitudinal Flat	-	-	20.00	-	11.90	-	238.0	-	24-1258	418.10	-	528.20	-	39.90	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.70	-	468.0	-	24-2329	419.00	-	528.00	-	41.50	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	24-2329	421.00	-	529.00	-	42.30	0.80
2403294	Longitudinal Flat	-	-	20.00	-	11.40	-	228.0	-	24-1310	415.40	-	526.30	-	38.30	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
2403294	24-2931	Transversal	10x7.5x55	0	-	144	130	157	20.0	144	-	-	-	95	95	95	1.27	1.15	1.39
2403294	24-2932	Longitudinal	10x7.5x55	-52	21.0	166	153	141	30.0	153	-	-	-	95	95	95	1.48	1.35	1.24
2403294	24-2931	Transversal	10x7.5x55	0	-	161	149	134	20.0	148	-	-	-	95	95	95	1.43	1.32	1.18
2403294	24-2932	Longitudinal	10x7.5x55	-52	21.0	177	150	164	30.0	164	-	-	-	95	95	95	1.58	1.33	1.46
2403294	24-3033	Transversal	10x7.5x55	0	-	131	145	157	20.0	144	-	-	-	95	95	95	1.15	1.28	1.40
2403294	24-3034	Longitudinal	10x7.5x55	-52	21.0	139	154	167	30.0	153	-	-	-	95	95	95	1.22	1.36	1.48

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 26 NOV. 2024

Approved by S.COZZANI on 10/10/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,56 HEAT 2403294 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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08.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
0.492 tons - lbs	11.56 meters - feets	1	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1790	-	-	-	-	-	-	-	<20
2403294	24-1790	-	-	-	-	-	-	-	<20

BUREAU VERITAS
ITALY
WITNESSED - NOTED - REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 10/10/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,56 HEAT 2403294 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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08.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
0.492 tons - lbs	11.56 meters - feets	1	1

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part.1 & 2 -2021/ISO.15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm. - | Schedule: XS/80 | Length: 10.00 - 11.80 m - | -

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
2403294	24-884	450	270.40	-
2403294	24-884	450	266.80	-
2403294	24-913	450	268.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2249	OK
2403294	24-2249	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
2403294	24-557	0	9
2403294	24-557	0	9
2403294	24-565	0	9

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Heat

Heat	Pieces	Length (m)	Weight (kg)
2403294	1	11.56	492

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by S.COZZANI on 10/10/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,56 HEAT 2403294 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004					Page 5/5 B 30638/7 08.10.2024		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 0.492 tons - lbs	Total Length: 11.56 meters - feets	Pieces 1 / Bundles 1
Buyer's reference PO NO. : OF240574	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
Contract 50006380	Dimensions: 168.28 x 10.97 mm -		Schedule: XS/80			Length: 10.00 - 11.80 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
22	-		205	-	20.5	10	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 6 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by S.COZZANI on 10/10/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07643 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziale da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08430	472/16	TEST COUPON FROM PIPE O.D. 168.3 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 168.3 mm WTH. 10.97 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/16	24CA08430	2403294

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - PROV. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07643 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/16	24CA08430	24PR46508	19.06 x 10.72	204.32	50	LM	+ 24	≥ 360 ≤ 530	364	≥ 460 ≤ 760	517	≥ 22.6	40.6	≤0.93	0.70

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP07643 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/16	24CA08430	24PR46507	10x10x55	BLM	-50	≥ 27/27	328	333	340	334										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,2 HEAT 2403292 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

Buyer's reference: PO NO. : OF240574
Contract 50006380

Item	Item Client
22	-

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

SEAMLESS STEEL LINE PIPES

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Page 1/9
B 30638/6
04.10.2024

ArcelorMittal

Total weight:	Total Length:	Pieces	Bundles
5,385 tons - lbs	126.51 meters - feets	11	3

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
2307843		Heat analysis		0.15	1.23	0.20	0.001	0.012	0.01	0.02	0.01	0.028	0.00	0.067	0.001	0.002	0.0005	0.0038
2307846		Heat analysis		0.14	1.24	0.18	0.002	0.013	0.01	0.02	0.01	0.027	0.00	0.068	0.001	0.001	0.0004	0.0030
2403292		Heat analysis		0.14	1.24	0.21	0.002	0.014	0.02	0.02	0.01	0.032	0.00	0.070	0.002	0.002	0.0005	0.0038
2403294		Heat analysis		0.15	1.30	0.20	0.001	0.015	0.02	0.02	0.01	0.030	0.00	0.068	0.001	0.002	0.0005	0.0038
2307843	24-352	Product analysis		0.15	1.26	0.21	0.001	0.011	0.01	0.02	0.06	0.030	0.00	0.066	0.001	0.002	0.0003	0.0041
2307843	24-352	Product analysis		0.15	1.25	0.22	0.001	0.010	0.01	0.02	0.07	0.031	0.00	0.065	0.001	0.002	0.0003	0.0042
2307846	24-222	Product analysis		0.14	1.27	0.20	0.002	0.012	0.01	0.02	0.01	0.030	0.00	0.067	0.001	0.002	0.0004	0.0035
2307846	24-222	Product analysis		0.15	1.26	0.20	0.002	0.011	0.01	0.02	0.01	0.030	0.00	0.066	0.001	0.002	0.0004	0.0034
2403292	24-587	Product analysis		0.14	1.23	0.20	0.002	0.010	0.02	0.02	0.01	0.031	0.00	0.070	0.002	0.002	0.0005	0.0036
2403292	24-587	Product analysis		0.15	1.24	0.21	0.002	0.010	0.02	0.02	0.01	0.032	0.00	0.069	0.002	0.002	0.0005	0.0038
2403294	24-593	Product analysis		0.15	1.30	0.20	0.001	0.015	0.01	0.02	0.01	0.029	0.00	0.068	0.001	0.002	0.0005	0.0036
2403294	24-593	Product analysis		0.15	1.29	0.20	0.001	0.015	0.01	0.02	0.01	0.030	0.00	0.067	0.001	0.002	0.0005	0.0034

BUREAU VERITAS ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 22/10/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,2 HEAT 2403292 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER 1
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30638/6
04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
2307843		Heat analysis		7.37	0.068	0.070	0.091	0.37	0.02
2307846		Heat analysis		9.00	0.069	0.070	0.089	0.36	0.02
2403292		Heat analysis		8.42	0.072	0.074	0.104	0.37	0.03
2403294		Heat analysis		7.89	0.069	0.071	0.098	0.39	0.03
2307843	24-352	Product analysis		7.32	0.067	0.069	0.139	0.38	0.07
2307843	24-352	Product analysis		7.38	0.066	0.068	0.148	0.38	0.08
2307846	24-222	Product analysis		8.57	0.068	0.070	0.090	0.37	0.02
2307846	24-222	Product analysis		8.82	0.067	0.069	0.089	0.38	0.02
2403292	24-587	Product analysis		8.61	0.072	0.074	0.104	0.37	0.03
2403292	24-587	Product analysis		8.42	0.071	0.073	0.103	0.38	0.03
2403294	24-593	Product analysis		8.06	0.069	0.071	0.091	0.38	0.02
2403294	24-593	Product analysis		8.82	0.068	0.070	0.090	0.38	0.02

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
2307843	Longitudinal Flat	50.8	-	40.00	-	11.50	-	460.0	-	24-2329	417.00	-	526.00	-	41.20	0.79

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITHOUT NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

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Approved by QUALITY1 on 22/10/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30638/6
04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
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Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - - -

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
2307843	Longitudinal Flat	-	-	20.00	-	12.10	-	242.0	-	24-1310	416.90	-	527.30	-	39.90	0.79
2307846	Longitudinal Flat	50.8	-	40.00	-	11.80	-	472.0	-	24-2329	419.00	-	527.00	-	41.30	0.80
2307846	Longitudinal Flat	50.8	-	40.00	-	12.20	-	488.0	-	24-2329	421.00	-	530.00	-	42.20	0.79
2307846	Longitudinal Flat	-	-	20.00	-	11.60	-	232.0	-	24-1310	415.90	-	525.00	-	39.40	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	11.70	-	468.0	-	24-2238	419.00	-	528.00	-	42.80	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	12.00	-	480.0	-	24-2238	420.00	-	531.00	-	43.10	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	11.70	-	468.0	-	24-2238	418.00	-	528.00	-	42.60	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	12.00	-	480.0	-	24-2238	419.00	-	531.00	-	43.00	0.79
2403292	Longitudinal Flat	-	-	20.00	-	11.60	-	232.0	-	24-1258	415.90	-	526.30	-	39.40	0.79
2403292	Longitudinal Flat	-	-	20.00	-	12.00	-	240.0	-	24-1258	420.40	-	531.70	-	41.70	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	12.20	-	488.0	-	24-2238	421.00	-	531.00	-	43.30	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.90	-	476.0	-	24-2238	418.00	-	529.00	-	42.90	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	24-2238	420.00	-	532.00	-	43.20	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.60	-	464.0	-	24-2238	417.00	-	526.00	-	42.50	0.79
2403294	Longitudinal Flat	-	-	20.00	-	12.10	-	242.0	-	24-1258	419.00	-	530.20	-	41.10	0.79
2403294	Longitudinal Flat	-	-	20.00	-	11.90	-	238.0	-	24-1258	418.10	-	528.20	-	39.90	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	11.70	-	468.0	-	24-2329	419.00	-	528.00	-	41.50	0.79
2403294	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	24-2329	421.00	-	529.00	-	42.30	0.80
2403294	Longitudinal Flat	-	-	20.00	-	11.40	-	228.0	-	24-1310	415.40	-	526.30	-	38.30	0.79

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 22/10/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE

according to EN 10204/3.1/2004

-

B 30638/6

04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
2307843	24-3033	Transversal	10x7.5x55	0	-	154	168	138	20.0	153	-	-	-	95	95	95	1.37	1.50	1.21
2307843	24-3034	Longitudinal	10x7.5x55	-52	21.0	157	142	169	30.0	156	-	-	-	95	95	95	1.40	1.25	1.51
2307846	24-3033	Transversal	10x7.5x55	0	-	147	133	161	20.0	147	-	-	-	95	95	95	1.30	1.17	1.43
2307846	24-3034	Longitudinal	10x7.5x55	-52	21.0	176	158	142	30.0	159	-	-	-	95	95	95	1.58	1.41	1.25
2403292	24-2931	Transversal	10x7.5x55	0	-	148	135	159	20.0	147	-	-	-	95	95	95	1.31	1.18	1.41
2403292	24-2932	Longitudinal	10x7.5x55	-52	21.0	143	158	170	30.0	157	-	-	-	95	95	95	1.27	1.41	1.51
2403292	24-2931	Transversal	10x7.5x55	0	-	133	145	156	20.0	145	-	-	-	95	95	95	1.17	1.28	1.38
2403292	24-2932	Longitudinal	10x7.5x55	-52	21.0	154	142	172	30.0	156	-	-	-	95	95	95	1.37	1.25	1.53
2403294	24-2931	Transversal	10x7.5x55	0	-	144	130	157	20.0	144	-	-	-	95	95	95	1.27	1.15	1.39
2403294	24-2932	Longitudinal	10x7.5x55	-52	21.0	166	153	141	30.0	153	-	-	-	95	95	95	1.48	1.35	1.24
2403294	24-2931	Transversal	10x7.5x55	0	-	161	149	134	20.0	148	-	-	-	95	95	95	1.43	1.32	1.18
2403294	24-2932	Longitudinal	10x7.5x55	-52	21.0	177	150	164	30.0	164	-	-	-	95	95	95	1.58	1.33	1.46
2403294	24-3033	Transversal	10x7.5x55	0	-	131	145	157	20.0	144	-	-	-	95	95	95	1.15	1.28	1.40
2403294	24-3034	Longitudinal	10x7.5x55	-52	21.0	139	154	167	30.0	153	-	-	-	95	95	95	1.22	1.36	1.48

BUREAU VERITAS ITALY
WITHOUT NOTED REVIEWED
SURVEYOR F. PATTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 22/10/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,2 HEAT 2403292 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
2307843	24-1790	-	-	-	-	-	-	-	<20
2307843	24-1790	-	-	-	-	-	-	-	<20
2307846	24-1790	-	-	-	-	-	-	-	<20
2307846	24-1790	-	-	-	-	-	-	-	<20
2403292	24-1709	-	-	-	-	-	-	-	<20
2403292	24-1709	-	-	-	-	-	-	-	<20
2403292	24-1709	-	-	-	-	-	-	-	<20
2403292	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1709	-	-	-	-	-	-	-	<20
2403294	24-1790	-	-	-	-	-	-	-	<20
2403294	24-1790	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
2307843	24-913	450	273.00	-

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 22/10/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,2 HEAT 2403292 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI)*1000
2307846	24-913	450	269.10	-
2403292	24-884	450	268.10	-
2403292	24-884	450	272.00	-
2403294	24-884	450	270.40	-
2403294	24-884	450	266.80	-
2403294	24-913	450	268.10	-

BUREAU VERITAS
ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 22/10/24

Formular.12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 168,28 x 10.97 mm
-
Schedule: XS/80

Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
2307843	24-2249	OK
2307846	24-2249	OK
2307846	24-2249	OK
2403292	24-2169	OK
2403292	24-2169	OK
2403292	24-2169	OK
2403292	24-2169	OK
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2169	OK
2403294	24-2249	OK
2403294	24-2249	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
2307843	24-565	0	9
2307846	24-565	0	9
2403292	24-557	0	9
2403292	24-557	0	9
2403294	24-557	0	9
2403294	24-557	0	9
2403294	24-565	0	9

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 22/10/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,2 HEAT 2403292 DIMENSIONS 168,3 x 10,97 ITEM 160

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN; NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30638/6
04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
2307843	1	11.30	481
2307846	2	22.54	959
2403292	2	23.20	988
2403294	6	69.47	2957

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

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Quality Control Representative

Approved by QUALITY1 on 22/10/24

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Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

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04.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
5.385 tons - lbs	126.51 meters - feets	11	3

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 168.28 x 10.97 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
22	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks
PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 6 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 22/10/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07642 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08429	472/15	TEST COUPON FROM PIPE O.D. 168.3 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 168.3 mm WTH. 10.97 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/15	24CA08429	2403292

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR & BOOTH DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07642

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/15	24CA08429	24PR46506	19.05 x 11.62	221.36	50	LM	+ 24	≥ 360 ≤ 530	363	≥ 460 ≤ 760	510	≥ 22.9	39.6	≤0.93	0.71

Note:
Notes:
REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. GOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07642 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/15	24CA08429	24PR46505	10x10x55	BLM	-50	≥ 27/27	335	340	343	339									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~AUDITED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,82 HEAT 2403323 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

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21.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.720 tons - lbs	8.82 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240522

Contract 50006354

Dimensions: 355.60 x 23.83 mm
-

Schedule: STD/30

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
2403323		Heat analysis		0.14	1.23	0.19	0.002	0.011	0.01	0.02	0.01	0.031	0.00	0.064	0.001	0.002	0.0004	0.0040
2403323	24-488	Product analysis		0.14	1.25	0.20	0.002	0.009	0.01	0.02	0.01	0.034	0.00	0.062	0.001	0.002	0.0003	0.0043
2403323	24-488	Product analysis		0.13	1.25	0.21	0.002	0.010	0.01	0.02	0.01	0.034	0.00	0.063	0.001	0.002	0.0003	0.0044

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
2403323		Heat analysis		7.75	0.065	0.067	0.093	0.36	0.03
2403323	24-488	Product analysis		7.91	0.063	0.065	0.085	0.36	0.02
2403323	24-488	Product analysis		7.73	0.064	0.066	0.086	0.35	0.02

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS
ITALY
WITNESSED - NOTED - REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,82 HEAT 2403323 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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21.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.720 tons - lbs	8.82 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240522
Contract 50006354

Dimensions: 355.60 x 23.83 mm
-

Schedule: STD/30

Length: 8.00 - 10.00 m
- -

Item	Item Client
15	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	403.00	-	517.00	-	37.30	0.78
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	397.00	-	515.00	-	36.60	0.77
2403323	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-1083	394.90	-	513.40	-	33.30	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
2403323	24-2516	Longitudinal	10x10x55	-52	28.0	182	174	187	40.0	181	-	-	-	95	95	95	1.61	1.52	1.66
2403323	24-2517	Transversal	10x10x55	0	-	154	174	165	27.0	164	-	-	-	95	95	95	1.32	1.53	1.44

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.- OD	HV 10 max.- Midwall	HV 10 max.- ID	HV 10 max.- End A	HV 10 max.- End B	HRC max.22
2403323	24-1483	-	-	-	-	-	-	-	<20
2403323	24-1483	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
~~WITNESSED~~ ~~NOTED~~ REVIEWED
SURVEYOR F.BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C. TAL JOB N°324002472
N° 1 MT 8,82 HEAT 2403323 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL. 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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21.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.720 tons - lbs	8.82 meters - feets	1	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240522
Contract 50006354

Dimensions: 355.60 x 23.83 mm
-

Schedule: STD/30

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
2403323	24-745	450	287.60	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
2403323	24-1877	OK
2403323	24-1877	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
2403323	24-428	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
2403323	1	8.82	1720

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F.BOTTI
DATE 26 NOV 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

Formular 12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,82 HEAT 2403323 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 4/4
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21.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.720 tons - lbs	8.82 meters - feets	1	-

Buyer's reference: PO NO. : OF240522
Contract 50006354

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 355.60 x 23.83 mm
-

Schedule: STD/30

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 24 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07644 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08431	472/17	TEST COUPON FROM PIPE O.D. 355.6 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 355.6 mm WTH. 23.83 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/17	24CA08431	2403323

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07644 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/17	24CA08431	24PR46510	Ø 8.71	59.58	35	TM	+ 24	≥ 360 ≤ 530	363	≥ 460 ≤ 760	491	≥ 20.6	36.0	≤0.93	0.74

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
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e-mail: lpm@lpmsnc.it
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07644 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result min			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/17	24CA08431	24PR46509	10x10x55	BLM	-50	≥ 27/27	196	192	175	188										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm; F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.; O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR DATE 26 NOV. 2024	E. FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,37 HEAT 809077 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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20.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.879 tons - lbs	50.67 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240522

Contract 50006354

Dimensions: 355.60 x 23.83 mm - | Schedule: STD/30 | Length: 8.00 - 10.00 m - | -

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
809077		Heat analysis		0.14	1.23	0.21	0.003	0.008	0.13	0.07	0.14	0.026	0.02	0.063	0.002	0.002	0.0001	0.0093
2403323		Heat analysis		0.14	1.23	0.19	0.002	0.011	0.01	0.02	0.01	0.031	0.00	0.064	0.001	0.002	0.0004	0.0040
809077	22-694	Product analysis		0.14	1.22	0.22	0.002	0.008	0.12	0.08	0.13	0.029	0.02	0.062	0.002	0.002	0.0002	0.0090
809077	22-694	Product analysis		0.14	1.23	0.22	0.002	0.008	0.12	0.08	0.13	0.029	0.02	0.063	0.002	0.002	0.0002	0.0092
2403323	24-488	Product analysis		0.14	1.25	0.20	0.002	0.009	0.01	0.02	0.01	0.034	0.00	0.062	0.001	0.002	0.0003	0.0043
2403323	24-488	Product analysis		0.13	1.25	0.21	0.002	0.010	0.01	0.02	0.01	0.034	0.00	0.063	0.001	0.002	0.0003	0.0044

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
809077		Heat analysis		2.80	0.065	0.067	0.357	0.40	0.29
2403323		Heat analysis		7.75	0.065	0.067	0.093	0.36	0.03
809077	22-694	Product analysis		3.22	0.064	0.066	0.336	0.40	0.27
809077	22-694	Product analysis		3.15	0.065	0.067	0.337	0.40	0.27
2403323	24-488	Product analysis		7.91	0.063	0.065	0.085	0.36	0.02
2403323	24-488	Product analysis		7.73	0.064	0.066	0.086	0.35	0.02

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 26 NOV. 2024

Approved by S.COZZANI on 02/09/24

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,37 HEAT 809077 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004

B 30410/1
20.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.879 tons - lbs	50.67 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240522

Contract 50006354

Dimensions: 355.60 x 23.83 mm - | Schedule: STD/30 | Length: 8.00 - 10.00 m - | - -

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
809077	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	397.00	-	514.00	-	36.40	0.77
809077	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	401.00	-	516.00	-	37.10	0.78
809077	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-1083	392.40	-	514.60	-	32.10	0.76
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	403.00	-	517.00	-	37.30	0.78
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-1939	397.00	-	515.00	-	36.60	0.77
2403323	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-1083	394.90	-	513.40	-	33.30	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
809077	24-2516	Longitudinal	10x10x55	-52	28.0	177	191	185	40.0	184	-	-	-	95	95	95	1.56	1.70	1.63
809077	24-2517	Transversal	10x10x55	0	-	166	159	171	27.0	165	-	-	-	95	95	95	1.45	1.38	1.50
2403323	24-2516	Longitudinal	10x10x55	-52	28.0	182	174	187	40.0	181	-	-	-	95	95	95	1.61	1.52	1.66
2403323	24-2517	Transversal	10x10x55	0	-	154	174	165	27.0	164	-	-	-	95	95	95	1.32	1.53	1.44

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR BOTH DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by S.COZZANI on 02/09/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,37 HEAT 809077 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30410/1
20.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.879 tons - lbs	50.67 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240522
Contract 50006354

Dimensions: 355.60 x 23.83 mm
-
Schedule: STD/30
Length: 8.00 - 10.00 m
-
-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
809077	24-1483	-	-	-	-	-	-	-	<20
809077	24-1483	-	-	-	-	-	-	-	<20
2403323	24-1483	-	-	-	-	-	-	-	<20
2403323	24-1483	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
809077	24-745	450	285.00	-
2403323	24-745	450	287.60	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
809077	24-1877	OK
809077	24-1877	OK
2403323	24-1877	OK
2403323	24-1877	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
809077	24-428	0	9
2403323	24-428	0	9

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALIA
WITHOUT NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by S.COZZANI on 02/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,37 HEAT 809077 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 4/5
B 30410/1
20.08.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.879 tons - lbs	50.67 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240522

Contract 50006354

Dimensions: 355.60 x 23.83 mm
-

Schedule: STD/30

Length: 8.00 - 10.00 m
-

-
-

Item	Item Client
15	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Heat

Heat	Pieces	Length (m)	Weight (kg)
809077	5	41.80	8150
2403323	1	8.87	1729

BUREAU VERITAS ITALY
WITNESSED / NOTED / REVIEWED
SURVEYOR F.BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 8,37 HEAT 809077 DIMENSIONS 355,6 x 23,83 ITEM 90

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -					Page 5/5 **B 30410/1** **20.08.2024**	ArcelorMittal		
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 9.879 tons - lbs	Total Length: 50.67 meters - feets	Pieces 6	Bundles -
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2018; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part.1 & 2 -2021/ISO 15156-2020;								
Buyer's reference PO NO. : OF240522 **Contract 50006354**	Dimensions: 355.60 x 23.83 mm -		Schedule: STD/30			Length: 8.00 - 10.00 m -		- -	
Item: 15 / Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -			

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA, Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO
Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 24 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by S.COZZANI on 02/09/24

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07645 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08432	472/18	TEST COUPON FROM PIPE O.D. 355.6 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 355.6 mm WTH. 23.83 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/18	24CA08432	809077

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07645 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/18	24CA08432	24PR46512	Ø 8.68	59.17	35	TM	+ 24	≥ 360 ≤ 530	375	≥ 460 ≤ 760	521	≥ 20.6	35.4	≤0.93	0.72

REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07645 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/18	24CA08432	24PR46511	10x10x55	BLM	-50	≥ 27/27	138	135	131	135										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,42 HEAT 819221 DIMENSIONS 273 x 15,88 ITEM 120

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30666/2
30.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.787 tons - lbs	117.07 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 273.00 x 15.88 mm - | Schedule: - | Length: 10.00 - 11.80 m - | - -

Item	Item Client
47	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
819221		Heat analysis		0.14	1.24	0.19	0.004	0.009	0.05	0.08	0.13	0.023	0.02	0.064	0.001	0.002	0.0001	0.0071
819224		Heat analysis		0.14	1.22	0.18	0.005	0.011	0.06	0.07	0.08	0.028	0.02	0.066	0.001	0.002	0.0001	0.0058
819221	24-551	Product analysis		0.15	1.26	0.20	0.004	0.007	0.05	0.07	0.12	0.026	0.02	0.062	0.001	0.002	0.0001	0.0072
819221	24-551	Product analysis		0.14	1.26	0.21	0.004	0.008	0.05	0.07	0.12	0.026	0.02	0.063	0.001	0.002	0.0001	0.0074
819224	24-540	Product analysis		0.15	1.24	0.19	0.004	0.009	0.06	0.07	0.07	0.031	0.02	0.064	0.001	0.002	0.0001	0.0063
819224	24-540	Product analysis		0.15	1.23	0.20	0.005	0.010	0.06	0.06	0.07	0.030	0.02	0.064	0.001	0.002	0.0001	0.0061

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
819221		Heat analysis		3.24	0.065	0.067	0.267	0.39	0.20
819224		Heat analysis		4.83	0.067	0.069	0.229	0.39	0.16
819221	24-551	Product analysis		3.61	0.063	0.065	0.255	0.40	0.19
819221	24-551	Product analysis		3.51	0.064	0.066	0.256	0.39	0.19
819224	24-540	Product analysis		4.92	0.065	0.067	0.217	0.39	0.15
819224	24-540	Product analysis		4.92	0.065	0.067	0.217	0.39	0.15

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

Approved by QUALITY1 on 11/10/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,42 HEAT 819221 DIMENSIONS 273 x 15,88 ITEM 120

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30666/2
30.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.787 tons - lbs	117.07 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 273.00 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
47	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
819221	Longitudinal Flat	50.8	-	40.00	-	16.90	-	676.0	-	24-2360	422.00	-	531.00	-	43.60	0.79
819221	Longitudinal Flat	50.8	-	40.00	-	16.40	-	656.0	-	24-2360	420.00	-	529.00	-	43.30	0.79
819221	Longitudinal Flat	-	-	20.00	-	16.50	-	330.0	-	24-1326	420.30	-	529.10	-	40.40	0.79
819224	Longitudinal Flat	50.8	-	40.00	-	17.10	-	684.0	-	24-2360	422.00	-	533.00	-	44.10	0.79
819224	Longitudinal Flat	-	-	20.00	-	16.90	-	338.0	-	24-1326	421.30	-	530.50	-	41.50	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T.°C			Shear Area min. %			Lateral Expansion min. mm		
819221	24-3069	Transversal	10x10x55	0	-	196	177	209	27.0	194	-	-	-	95	95	100	1.75	1.59	1.86
819221	24-3070	Longitudinal	10x10x55	-52	28.0	215	200	228	40.0	214	-	-	-	100	100	100	1.89	1.78	1.97
819224	24-3069	Transversal	10x10x55	0	-	211	202	188	27.0	200	-	-	-	100	100	95	1.87	1.80	1.68
819224	24-3070	Longitudinal	10x10x55	-52	28.0	233	219	205	40.0	219	-	-	-	100	100	100	1.99	1.92	1.82

BUREAU VERITAS ITALY
WITNESSED / NOTED REVIEWED
SURVEYOR DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

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Approved by QUALITY1 on 11/10/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,42 HEAT 819221 DIMENSIONS 273 x 15,88 ITEM 120

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30666/2
30.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
11.787 tons - lbs	117.07 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract **50006380**

Dimensions: 273.00 x 15.88 mm
-
Schedule: -
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
47	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
819221	24-1813	-	-	-	-	-	-	-	<20
819221	24-1813	-	-	-	-	-	-	-	<20
819224	24-1813	-	-	-	-	-	-	-	<20
819224	24-1813	-	-	-	-	-	-	-	<20

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
819221	24-918	450	272.00	-
819224	24-918	450	269.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
819221	24-2286	OK
819221	24-2286	OK
819224	24-2286	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
819221	24-572	0	10
819224	24-572	0	10

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR
DATE 26 NOV. 2024

Approved by QUALITY1 on 11/10/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -	Page 4/4 B 30666/2 30.09.2024	ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	Total weight: 11.787 tons - lbs	Total Length: 117.07 meters - feets	Pieces 10	Bundles -

Buyer's reference: PO NO. : OF240574	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;
Contract 50006380	Dimensions: 273.00 x 15.88 mm - / Schedule: - / Length: 10.00 - 11.80 m - / - -

Item	Item Client
47	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
819221	9	105.27	10599
819224	1	11.80	1188

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 13 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 11/10/24

L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07646 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08433	472/19	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 15.88 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/19	24CA08433	819221

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 82 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07646 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/19	24CA08433	24PR46514	19.03 x 17.45	323.07	50	LM	+ 24	≥ 360 ≤ 530	378	≥ 460 ≤ 760	524	≥ 24.7	44.4	≤0.93	0.72

REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Note:
Notes:

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07646 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID.	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION				
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm			
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C	
472/19	24CA08433	24PR46513	10x10x55	BLM	-50	≥ 27/27	273	278	256	269										

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 3 MT 34,96 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
м.Нікополь, пр.Трубників, 56
Тел./факс +38(0566)639-379LLC "INTERPIPE NIKO TUBE", UKRAINE,
Nikopol, 56, Trubnikov ave.
Tel./fax +38(0566)639-379

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24B2831 (A03)
Аркуш / Page 1
Аркушів / Pages 6
Дата / Data 25.03.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # (A07) COC24/0293
	Заводське замовлення/Production order # (A08) 24-001235
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) OF240060
Транспортний засіб/ Vehicle № KA4416IA/AA7696XF	

(B01,B02,B03) Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби відвантажені з фаскою./Pipes are beveled. Фаска за стандартом ASME B16.25 рис. 2a./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Завод сертифікований за PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice.
Розміри згідно стандарту ASME B36.10M-2018./Dimensions and weights according to ASME B36.10M-2018.
Труби відповідають стандарту ASME для котлів і посудини під тиском, розділ II, частина D, таблиця Y-1./Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Труби не містять радіаційні елементи./ Pipes do not contain radiation elements.
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).
Залишковий магнетизм не більше 30 Gs./The residual magnetism of less than 30 Gs.
Система менеджменту якості виробника сертифікована за ISO 9001:2015, сертифікат № 20100223014373, виданий компанією TUV AUSTRIA CERT GMBH, дійсний до 2025-06-06 ./ The manufacturer's quality management system is certified according to ISO 9001:2015 certificate No: 20100223014373 issued by TUV AUSTRIA CERT GMBH, valid until 2025-06-06.
Сталь повністю оброблена алюмінієм і виготовлена на практиці дрібної зернистості/Steel is Fully Aluminum Killed and made to fine grain practice.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилення до неї/The order is based on the requirements of specification TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Величина зерна max 7 балів відповідно ASTM E112./Grain size of max 7 points ASTM E112.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 880... 1000 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 880 deg C to 1000 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) Фактична вага Actual weight нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-VR2-12384		1240762	1238	273.0	12.70	10.00-11.80	23,25	2	1905	1900
2	24-VR2-12385		1240762	1238	273.0	12.70	10.00-11.80	23,43	2	1915	1910
				NPS 10	Sch 60 XS	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 2		46,68	4	3820	3810
3	24-VR2-12697		1240762	1245	273.0	15.09	10.00-11.80	23,10	2	2203	2198
				NPS 10	Sch 80	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 1		23,10	2	2203	2198
						РАЗОМ/TOTAL		**69,78**	**6**	**6023**	**6008**
						ПАКУНКІВ/BUNDLES 3					

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DATE 26 NOV. 2024

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 3 MT 34,96 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24B2831 (A03)
Аркуш / Page 2
Аркушів / Pages 6
Дата / Data 25.03.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	CEV x100	1
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	43	0.15
1240762	16.7	121.1	20.8	4	12	10.4	14.1	21.4	16	2	68	2	26	43	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	V+Nb+Ti
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) Зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	CEV x100	1
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	43	0.15
1240762		1	15	122	21	4	12	10	13	21	16	1	66	1	26	41	0.07
		2	15	123	21	4	12	10	13	21	16	1	66	1	26	41	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	V+Nb+Ti

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N° 3 MT 34,96 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24B2831 (A03)
Аркуш / Page 3
Аркушів / Pages 6
Дата / Data 25.03.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 35	(C13) Відносне подовження Elongation 35 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	27,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	0,93				
1240762	1238	595	-	460	-	29,0	-	-	-	0,77	L		8.9	35
1240762	1238	590	-	430	-	27,0	-	-	-	0,73	L		8.9	35
1240762	1245	590	-	420	-	29,0	-	-	-	0,71	L		8.9	35
1240762	1245	595	-	425	-	28,0	-	-	-	0,71	L		8.9	35

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 25	(C13) Відносне подовження Elongation 25 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0,93				
1240762	1238	589	-	414	-	28,0	-	-	-	0,70	L		5	25

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0,93				
1240762	1245	593	-	415	-	28,0	-	-	-	0,70	L		10	50

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

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N° 3 MT 34,96 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24B2831 (A03)
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Аркушів / Pages 6
Дата / Data 25.03.2024

Випробування на удар/Impact test

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240762	1238	T	KV -40°C	27	83	90	78	83,7		10x7.5
1240762	1245	T	KV -40°C	27	69	88	66	74,3		10x10

Випробування на удар/Impact test ASTM A370

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240762	1238	T	KV 0°C	27	147	122	178	149,0		10x7.5
1240762	1245	T	KV 0°C	27	131	164	139	144,7		10x10

Випробування на удар/Impact test ASTM A370/ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240762	1238	L	KV -45°C	18	92	77	86	85,0		10x10
1240762	1238	L	KV -52°C		62	55	70	62,3		10x10
1240762	1245	L	KV -45°C	18	88	85	57	76,7		10x10
1240762	1245	L	KV -52°C		43	25	28	32,0		10x10

Випробування на удар/Impact test ISO 6892-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of slip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240762	1238	T	KV -20°C	35	122	125	114	120,3		10x7.5
1240762	1245	T	KV -20°C	27	110	121	80	103,7		10x10

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

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EN 10204-2004/3.1

(A03)
No : 24B2831
Аркуш / Page 5
Аркушів / Pages 6
Дата / Data 25.03.2024

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки / Heat #	(B07.2) Номер партії / Lot #	HRB (C31.1) 1	HRB (C31.1) 2	HRB (C31.1) 3	HRB (C32.1) ср.знач./av.	HRC (C31.2)	HB (C31.3) 1	HB (C31.3) 2	HB (C31.3) 3	HB (C31.3) ср.знач./av.	HV (C31.4) 1	HV (C31.4) 2	HV (C31.4) 3	HV (C31.4) 4	HV (C32.4) ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1240762	1238	91	90	92	91	<22	-	-	-	-	-	-	-	-	-
1240762	1238	90	89	89	89	<22	-	-	-	-	-	-	-	-	-
1240762	1245	90	89	90	90	<22	-	-	-	-	-	-	-	-	-
1240762	1245	90	91	91	91	<22	-	-	-	-	-	-	-	-	-

Металографічні випробування / Metallurgical tests

(B07.1) Номер плавки / Heat #	(C00.1) Номер партії / Lot #	Малюнок / Figure	Полосчатость / Striation	Відманштетт / Vidmanshtett	Нітриди і карбонітриди точкові / строчечного / Nitrides and carbonitrides of Tispo/stitch	Величина зерна / Grain size номер/number 1		2		3	
		бал/points	бал/points	бал/points	бал/points						
min		-	-	-	-	7		7		7	
max		-	-	-	-	-		-		-	
1240762	1238	-	-	-	-	8,0	8,0	-	-	-	-
	1245	-	-	-	-	8,0	8,0	-	-	-	-

(C50,D55)
Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	100% / 20.5 MPa /10 sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-3./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-3.	100%	Задовільно / Satisfactory
Контроль кінців труб/ SEA inspectio	Неконтрольовані кінці труб обрізані./Non-inspected ends are cutted.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)
Маркування фарбою/ Marking paint
{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 273,0 12,7 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 10 SCH 60 XS {отметка приемщика} HF LT -52C S 81,53 COC24/0293 {Тип покрытия}
{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 273,0 15,09 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 10 SCH 80 {отметка приемщика} HF LT -52C S 95,98 COC24/0293 {Тип покрытия}

(A04,B08)
Маркування клеймами/ Dot marking
{HEAT}

WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI

(Z01)
Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 11/04/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 3 MT 34,96 HEAT 1240762 DIMENSIONS.273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201360

ООВ ВНІТІ-ТЕСТ
№ ВО054
ДСТУ ІСО 9001:2015

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24B2831 (A03)
Аркуш / Page 6
Аркушів / Pages 6
Дата / Data 25.03.2024

(A05,Z02,Z03)

Дата/Data	
25.03.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Тітова І.П./Titova I.P.
INTERPIPE E5	

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 11/04/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 24B2951 (A03)
Аркуш / Page 1
Аркушів / Pages 8
Дата / Data 27.03.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d`Arda (PC) , Italy	Контракт №/ Contract # (A07) COC24/0293 Заводське замовлення/Production order # (A08) 24-001235
Країна/ Country (A06.1) Italy	№ замовлення клієнта/ Customers ref # (A09) OF240060
Транспортний засіб/ Vehicle № AI7471OT/AI0833XG	

(B01,B02,B03)

Стан постачання / Dellivery condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби відвантажені з фаскою./Pipes are beveled.
	Фаска за стандартом ASME B16.25 рис. 2а./Bevelled ends as per ASME B16.25 Fig 2a.
	Кінці труб оснащені пластиковими протекторами./The ends of pipes are equipped by plastic protectors.
	Труби покриті лаком./Pipes are coated with varnish.

Додаткова інформація/Additional information
Завод сертифікований за PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сталь спокійна дрібнозерниста./Steel is fully Killed and made to fine grain practice.
Розміри згідно стандарту ASME B36.10M-2018./Dimensions and weights according to ASME B36.10M-2018.
Труби відповідають стандарту ASME для котлів і посудини під тиском, розділ II, частина D, таблиця Y-1./Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Система менеджменту якості виробника сертифікована за ISO 9001:2015, сертифікат № 20100223014373/00, виданий компанією TUV AUSTRIA CERT GMBH, дійсний до 2025-06-06 ./ The manufacturer's quality management system is certified according to ISO 9001:2015 certificate No: 20100223014373/00 issued by TUV AUSTRIA CERT GMBH, valid until 2025-06-06.
Труби не містять радіаційні елементи./ Pipes do not contain radiation elements.
Твердість відповідає вимогам NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB)./Hardness meets the requirements NACE MR0175/ISO 15156-2:2015/NACE MR0103/ISO 17945:2015 - max 22HRC (100HRB).
Залишковий магнетизм не більше 30 Gs./The residual magnetism of less than 30 Gs.
Сталь повністю оброблена алюмінієм і виготовлена на практиці дрібної зернистості/Steel is Fully Aluminum Killed and made to fine grain practice.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилення до неї/The order is based on the requirements of specification TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Величина зерна max 7 балів відповідно ASTM E112./Grain size of max 7 points ASTM E112.

Термообробка/Heat treatment
Труби виготовлені шляхом гарячої деформації і нормалізовані при температурі 880... 1000 град., охолодження на повітрі./Pipes produced by Hot Forming followed by normalizing at the temperature 880 deg C to 1000 deg C cooled at air.

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	24-VR2-14823		1240762	1238	273.0	12.70	10.00-11.80	23,21	2	1904	1899
				NPS 10	Sch 60 XS	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 1		23,21	2	1904	1899
2	24-VR2-12691		1240762	1245	273.0	15.09	10.00-11.80	23,45	2	2254	2249
3	24-VR2-12692		1240762	1245	273.0	15.09	10.00-11.80	23,44	2	2251	2246
4	24-VR2-12693		1240762	1245	273.0	15.09	10.00-11.80	23,45	2	2254	2249
5	24-VR2-12694		1240762	1245	273.0	15.09	10.00-11.80	11,72	1	1120	1119
6	24-VR2-12696		1240762	1245	273.0	15.09	10.00-11.80	23,29	2	2235	2230
7	24-VR2-12698		1240762	1245	273.0	15.09	10.00-11.80	23,19	2	2232	2227
				NPS 10	Sch 80	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 6		128,54	11	12346	12320
8	24-VR2-14451		1240952	1468	323.8	8.38	10.00-11.80	23,14	2	1523	1518
9	24-VR2-14452		1240952	1468	323.8	8.38	10.00-11.80	11,78	1	765	764

BUREAU VERITAS ITALY APPROVED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

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Approved by QUALITY1 on 11/04/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201349

ООВ ВНІТ-ТЕСТ
№ ЕО054
ДСТУ ІSO 9001:2015

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24B2951 (A03)
Аркуш / Page 2
Аркушів / Pages 8
Дата / Data 27.03.2024

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B08) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) Фактична вага Actual weight нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
10	24-VR2-14453		1240952	1468	323.8	8.38	10.00-11.80	10,77	1	715	714
11	24-VR2-14454		1240952	1468	323.8	8.38	10.00-11.80	22,76	2	1503	1498
12	24-VR2-14456		1240952	1468	323.8	8.38	10.00-11.80	11,72	1	747	746
				NPS 12	Sch 30	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 5		80,17	7	5253	5240
13	24-VR2-14441		1240513	1469	323.8	9.53	10.00-11.80	22,98	2	1707	1702
				NPS 12	Sch STD	РАЗОМ/TOTAL ПАКУНКІВ/BUNDLES 1		22,98	2	1707	1702
						РАЗОМ/TOTAL		**254,90**	**22**	**21210**	**21161**

ПАКУНКІВ/BUNDLES 13

BUREAU VERITAS
ITALY
WITHDRAWN NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 11/04/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

The testing laboratory is accredited in accordance with the requirements of DSTU EN ISO/IEC 17025:2019 201360

ООВ ВНІТІ-ТЕСТ № 80054 ДСТУ ISO 9001:2015

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24B2951 (A03)
Аркуш / Page 3
Аркушів / Pages 8
Дата / Data 27.03.2024

(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	CEV x100	1	2
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	43	0.11	0.15
1240513	14.7	1222	21.5	3	13	7.7	11.1	18.8	12	2	70	2	34	0.5	40	0.07	0.07
1240762	16.7	121.1	20.8	4	12	10.4	14.1	21.4	16	2	68	2	26	0.5	43	0.07	0.07
				4													
1240952	15.4	1213	19.4	3	12	9	11.9	22.2	11	3	72	1	30	0.4	41	0.07	0.08

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/Plant - manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) Зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	CEV x100	1	2
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	43	0.11	0.15
1240513		1	15	121	22	3	13	7	10	18	11	2	69	1	35	0.3	40	0.07	0.07
		2	14	121	22	3	13	7	10	18	11	2	69	1	35	0.3	39	0.07	0.07
1240762		1	15	122	21	4	12	10	13	21	16	1	66	1	26	0.3	41	0.07	0.07
		2	15	123	21	4	12	10	13	21	16	1	66	1	26	0.3	41	0.07	0.07
1240952		1	16	121	20	4	13	9	11	22	11	3	70	1	31	0.4	42	0.07	0.07
		2	16	120	20	4	12	9	11	22	11	2	69	1	31	0.4	42	0.07	0.07

CEViiw	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
1	Nb+V
2	V+Nb+Ti

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SURVEYOR E.BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 11/04/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE (A02)
EN 10204-2004/3.1

No : 24B2951 (A03)
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Дата / Data 27.03.2024

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 35	(C13) Відносне подовження Elongation 35 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	27,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	0,85				
1240762	1238	595	-	460	-	29,0	-	-	-	0,77	L		8.9	35
1240762	1238	590	-	430	-	27,0	-	-	-	0,73	L		8.9	35
1240762	1245	590	-	420	-	29,0	-	-	-	0,71	L		8.9	35
1240762	1245	595	-	425	-	28,0	-	-	-	0,71	L		8.9	35

Випробування на розтягнення/ Tensile test ASTM A370

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності t0,5 Yield strength t0,5	(C11) Межа плинності t0,5 Yield strength t0,5 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460	-	360	-	14,0	-	-	-	-				
max		760	-	530	-	-	-	-	-	0,85				
1240513	1469	575	-	410	-	36,0	-	-	-	0,71	L	38.1		50
1240513	1469	570	-	405	-	34,0	-	-	-	0,71	L	38.1		50
1240952	1468	555	-	405	-	35,0	-	-	-	0,73	L	38.1		50
1240952	1468	555	-	400	-	33,0	-	-	-	0,72	L	38.1		50

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 25	(C13) Відносне подовження Elongation 25 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0,85				
1240762	1238	589	-	414	-	28,0	-	-	-	0,70	L		5	25

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

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INSPECTION CERTIFICATE (A02)
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No : 24B2951 (A03)
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Дата / Data 27.03.2024

Випробування на розтягнення/ Tensile test ISO 6892-1

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності p0,2 Yield strength p0,2	(C11) Межа плинності p0,2 Yield strength p0,2 t=	(C13) Відносне подовження Elongation 50	(C13) Відносне подовження Elongation 50 t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Базова довжина зразка Gauge length
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490	-	355	-	22,0	-	-	-	-				
max		650	-	-	-	-	-	-	-	0.85				
1240513	1469	531	-	400	-	28,5	-	-	-	0,75	L	20		50
1240762	1245	593	-	415	-	28,0	-	-	-	0,70	L		10	50
1240952	1468	549	-	418	-	30,5	-	-	-	0,76	L	20		50

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

Випробування на удар/Impact test

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240762	1238	T	KV -40°C	27	83	90	78	84		10x7.5
1240762	1245	T	KV -40°C	27	69	88	66	74		10x10

Випробування на удар/Impact test ASTM A370

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240513	1469	T	KV -55°C	28	106	80	80	89		10x7.5
1240513	1469	T	KV 0°C	27	241	258	255	251		10x7.5
1240762	1238	T	KV 0°C	27	147	122	178	149		10x7.5
1240762	1245	T	KV 0°C	27	131	164	139	145		10x10
1240952	1468	T	KV 0°C	27	164	206	157	176		10x6.67

Випробування на удар/Impact test ASTM A370/ASTM E23

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240513	1469	L	KV -48°C	14	105	121	111	112		10x7.5
1240762	1238	L	KV -45°C	18	92	77	86	85		10x10
1240762	1238	L	KV -52°C		62	55	70	62		10x10
1240762	1245	L	KV -45°C	18	88	85	57	77		10x10
1240762	1245	L	KV -52°C		43	25	28	32		10x10

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SURVEYOR
DATE 26 NOV. 2024

Approved by QUALITY1 on 11/04/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
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1240952	1468	L	KV -50°C	12	114	112	99	108	10x6.67
1240952	1468	L	KV -57°C		96	86	88	90	10x6.67

Випробування на удар/Impact test ISO 148-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240952	1468	L	KV -20°C	53	113	116	120	116		10x5
1240952	1468	L	KV -40°C	40	83	99	92	91		10x5

Випробування на удар/Impact test ISO 6892-1

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1240513	1469	T	KV -20°C	35	117	97	92	102		10x5
1240513	1469	T	KV -40°C	27	88	86	77	84		10x5
1240762	1238	T	KV -20°C	35	122	125	114	120		10x7.5
1240762	1245	T	KV -20°C	27	110	121	80	104		10x10

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

(C30) **Твердість / Hardness test temperature +20°C**

(B07.1) Номер плавки	(B07.2) Номер партії	HRB				HRC	HB				HV				
		(C31.1)	(C31.1)	(C31,1)	(C32.1)	(C31.2)	(C31.3)	(C31.3)	(C31.3)	(C31.3)	(C31.4)	(C31.4)	(C31.4)	(C31.4)	(C32.4)
Heat #	Lot #	1	2	3	ср.знач./av.		1	2	3	ср.знач./av.	1	2	3	4	ср.знач./av.
min		-	-	-	-	-	-	-	-	-	-	-	-	-	-
max		100	100	100	100	22	-	-	-	-	-	-	-	-	-
1240513	1469	89	89	88	89	<22	-	-	-	-	-	-	-	-	-
1240513	1469	88	87	88	88	<22	-	-	-	-	-	-	-	-	-
1240762	1238	91	90	92	91	<22	-	-	-	-	-	-	-	-	-
1240762	1238	90	89	89	89	<22	-	-	-	-	-	-	-	-	-
1240762	1245	90	89	90	90	<22	-	-	-	-	-	-	-	-	-
1240762	1245	90	91	91	91	<22	-	-	-	-	-	-	-	-	-
1240952	1468	88	89	87	88	<22	-	-	-	-	-	-	-	-	-
1240952	1468	86	87	86	86	<22	-	-	-	-	-	-	-	-	-

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Металографічні випробування / Metallurgical tests

(B07.1) Номер плавки Heat #	(C00.1) Номер партії Lot #	Малюнок Figure	Полосчатость Striation	Відманштет Vidmanshtett	Нітриди і карбонітриди точкові / строчечного Nitrides and carbonitrides of Tispot/stitch	Величина зерна Grain size номер/number					
		бал/points	бал/points	бал/points	бал/points	1		2		3	
min		-	-	-	-	7		7		7	
max		-	-	-	-	-		-		-	
1240513	1469	-	-	-	-	8,5	8,5	-	-	-	-
1240762	1238	-	-	-	-	8,0	8,0	-	-	-	-
	1245	-	-	-	-	8,0	8,0	-	-	-	-
1240952	1468	-	-	-	-	9,0	9,0	-	-	-	-

(C50,D55)

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющування/ Flattening tes	Труби пройшли випробування на сплющування./Pipes passed flattening test.	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic tes	20,5 MPa /10 sec.-for pipes in size-(273,00x12,70); (273,00x15,09) 15,8 MPa /10 sec.-for pipes in size-(323,80x8,38) 18,0MPa /10 sec.-for pipes in size-(323,80x9,53)	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length bod	Метод контролю:/Method:/Магнітоіндукційний контроль:/Magnetic flux leakage inspection:/Поздовжня риска 12,5% на зовнішній і внутрішній поверхні по ISO 10893-3./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-3.-for pipes in size-273,00x12,70;323,80x8,38;323,80x9,53 Метод контролю: /Method: Ультразвуковий контроль/ UT inspection/ Поздовжня ризка 12,5% на зовнішній і внутрішній поверхні по ISO 10893-10, клас U4/C./Longitudinal notch with depth 12,5% on external and internal surface acc. to ISO 10893-10, class U4 / C- for pipes in size- 273,00x15,09	100%	Задовільно / Satisfactory
Контроль кінців труб/ SEA inspectio	Неконтрольовані кінці труб обрізані./Non-inspected ends are cutted.	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspectio	Вироби піддавалися візуальному огляду і контролю розмірів. / Visual and dimensional test is satisfactory.	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspectio	За стандартом./As per Standard.	100%	Задовільно / Satisfactory

(A04,B06)

Маркування фарбою/ Marking paint

{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 273,0 12,7 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 10 SCH 60 XS {отметка приемщика} HF LT -52C S 81,53 COC24/0293 {Тип покрытия}
{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 273,0 15,09 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 20,5MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 10 SCH 80 {отметка приемщика} HF LT -52C S 95,98 COC24/0293 {Тип покрытия}
{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 323,8 8,38 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 15,8MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 12 SCH 30 {отметка приемщика} COC24/0293 HF LT -52C S 65,19 {Тип покрытия}
{Логотип полный} API SPEC 5L 0409 {монограмма} {месяц год} ASTM A333/A333M/ASME SA333/SA333M/EN 10216-3/ANSI/NACE MR0175/ISO 15156-2/ANSI/NACE MR0103/ISO 17945 323,8 9,53 X52N/L360N/6/P355NL1 TC1 PSL2 SMLS {HEAT} {№ Партии} TESTED 18,0MPA {длина трубы в метрах до двух десятичных знаков} {Вес трубы в кг} NPS 12 STD {отметка приемщика} COC24/0293 HF LT -52C S 73,86 {Тип покрытия}

(A04,B06)

Маркування клеймами/ Dot marking

{HEAT}

BUREAU VERITAS
WITNESSED - NOTED - REVIEWED
SURVEYOR
DATE 26 NOV 2024

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 11/04/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,49 HEAT 1240762 DIMENSIONS 273 x 12,7 ITEM 130

INTERPIPE NIKO TUBE

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)

ТОВ "ІНТЕРПАЙП НІКО ТЬЮБ" Україна,
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ
INSPECTION CERTIFICATE
EN 10204-2004/3.1 (A02)

No : 24B2951 (A03)
Аркуш / Page 8
Аркушів / Pages 8
Дата / Data 27.03.2024

(Z01)

Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
27.03.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Шпак Т.А./Shpak T.A.
INTERPIPE NIKO TUBE E5	

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)

Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38 (056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 11/04/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
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Tel. (0523) 1864011 - Fax (0523) 592744
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07647 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08434	472/20	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/20	24CA08434	1240762

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07647 | **Data** Date NOVEMBER,26/2024 | **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/20	24CA08434	24PR46516	18.93 x 12.81	242.49	50	LM	+ 24	≥ 360 ≤ 530	435	≥ 460 ≤ 760	587	≥ 23.3	31.2	≤0.93	0.74

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07647 | **Data** Date NOVEMBER, 26/2024 | **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/20	24CA08434	24PR46515	10x10x55	BLM	-50	≥ 27/27	56	59	55	57									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI ~~Prov. PIACENZA~~ N. 824 - Prov. PIACENZA -

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 11 MT 129,3 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ІНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубників,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
Контактна інформація: +38(0562)35-85-07,quality@m.interpipe.biz
LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
Legal address: Trubnykiv Av.,56,Nikopol,Ukraine,53200
Facility address: Kaschtanova Str.,35,Dnipro,Ukraine,49081
Contact information: +38(0562)35-85-07,quality@m.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 1/5
Дата / Data 13.06.2024

Вантажоодержувач/ Consignee. (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d'Arda (PC) , Italy	Контракт №/ Contract # COC24/0868
	Заводське замовлення/Production order # (A08) 640868/101
Країна/ Country (A06.1) Італія/Italy	№ замовлення клієнта/ Customers ref # (A07) PO#OF240243
Транспортний засіб/ Vehicle № AX 3685BO/AX4404XT	Унікальний №/ Unique # 24-003469 (A09)

(B01,B02,B03)	
Стан постачання / Dellivery condition Нормалізовані / Normalized condition	Труби сталеві безшовні гарячекатані для нафтогазапроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби з фаскою. Обрізка кінців згідно ASME B 16.25 фігура 2A / Pipes will be delivered with beveled ends. BE according to ASME B 16.25, fig. 2A.
	Труби із пластиковими протекторами / Pipes with plastic protectors.
	Труби покриті чорним лаком / Pipes are coated with black varnish

Додаткова інформація/Additional information
Маса фактична. / Actual weight.
Завод сертифікований по PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сертифікований ТЮФ Тюринген за AD2000 Merkblatt W4 including paragraph 7, February 2013 та за Директивою 2014/68/EU для ємностей високого тиску; реєстраційний номер сертифікаційного центру 0090. Сертифікат відповідності на систему управління якістю № 31102006 QM15. / Approved acc. to AD2000 Merkblatt W4 including paragraph 7, February 2013 and certified acc. to Pressure Equipment Directive 2014/68/EU by TUV Thuringen e.V.; notified body, reg.-no.0090. Conformance Certificate on Quality Management System № 31102006 QM15.
Без травлення/ Pipes without etching.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилень до неї/The order is based on the requirements of the TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Труби відповідають вимогам ASME для котлів та ємностей під тиском, розділ II, частина D, таблиця Y-1. / Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Країна виплавки та виробництва - Україна./Country of melt and manufacturer UKRAINE.
Процес виробництва сталі: електросталеплавильне виробництво./ Steel making process: Electric Arc Furnace.
Твердість відповідає вимогам ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015 / Hardness acc. to ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015.
Сталь спокійна дрібнозерниста. / Steel is fully Killed and made to fine grain practice.
Вироби піддалися візуальному огляду та контролю розмірів / visual and dimensional test is satisfactory.
Розміри згідно стандарту ASME B36.10M/ Dimensions and weights according to ASME B36.10M.
Відповідність ASME II part.D Tab. Y1/ Compliance with ASME II part.D Tab. Y1.
Сталь, розкислена алюмінієм і виготовлена згідно з технологією виготовлення дрібнозернистої сталі/Steel is Fully Aluminum Killed and made to fine grain practice.
Підтвердження Системи управління контролем якості (QAM) згідно з ISO 9001/Quality Assurance Management (QAM) System Validation according to ISO 9001.
Труби не містять радіаційні елементи./Pipes do not contain radiation elements.

Термообробка/Heat treatment
Нормалізація або нормалізаційна деформація здійснюється при тем-ре 880 грС–1000 грС з наступним охолодженням на повітрі / Normalization or normalization deformation is carried out at a temperature of 880 °C–1000 °C, followed by cooling in air

BUREAU VERITAS ITALY
REVISED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 11 MT 129,3 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
"ИНТЕРПАЙП НИКО ТЬЮБ"
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LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 2/5
Дата / Data 13.06.2024

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD мм mm	(B09) Товщина стінки WT мм mm	(B010) Довжина Length м m	(B11) Загальна довжина Total length м m	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross кг kg	(B13) нетто net кг kg
1	27	10683	1241673	2394	273.0	12.70	10.00-11.80	11,74	1	964	954
2	39	10656	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	958	948
3	40	10679	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	964	954
4	41	10657	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
5	42	10659	1241674	2393	273.0	12.70	10.00-11.80	11,61	1	940	930
6	43	10655	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
7	44	10660	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	954	944
8	33	10666	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
9	34	10663	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	956	946
10	35	10675	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	950	940
11	36	10673	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	958	948
12	37	10658	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	944	934
13	38	10678	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
14	26	10676	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	948	938
15	28	10664	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	968	958
16	30	10677	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	950	940
17	31	10668	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	968	958
18	32	10669	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	962	952
19	22	10671	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	960	950
20	23	10662	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
21	24	10672	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
22	25	10674	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	954	944
		For item/поз.: # 24-003469-011		NPS 10	Sch 60 XS	РАЗОМ/TOTAL		258,58	22	21074	20854
						ПАКУНКІВ/BUNDLES 22					
						Супровідний дерев'яний пакувальний матеріал / Accompanying packaging wooden material				56	
						РАЗОМ ВАНТАЖ/TOTAL CARGO		258,58	22	21130	20854

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F.BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 11 MT 129,3 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
"ИНТЕРПАЙП НИКО ТЬЮБ"
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пр.Трубників,56,м.Нікополь,Україна,53200
Адрес виробництва:
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
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(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241673	14.3	122.1	17.3	5	15	10.2	12.8	23.2	13	2	67	2	26	0.5	6.3	0.41
1241674	14.8	122.8	19	5	14	10.2	11.4	22.9	11	2	65	2	29	0.5	6.3	0.41

CEV	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/ Plant-manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу метала труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C00.1) зразок Test piece	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241674	2393	1	15	123	19	5	12	10	11	23	10	2	64	1	28	0,4	7	41
1241673	2394	2	16	122	17	5	15	10	12	22	12	1	68	1	27	0,5	9	42

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності Rt0,5 Yield strength Rt0,5	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 50.8	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490		360		14				-				
max		650		530						-				
1241673	2394	565		410		36					L		8,9	35
		570		405		35					L		8,9	35

BUREAU VERITAS
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WITNESSED NOTED REVIEWED
SURVEYOR
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 11 MT 129,3 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ІНТЕРПАЙП НИКО ТЬЮБ"
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
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Дата / Data 13.06.2024

1241674	2393	565		420		32,0					L		8,9	35
		575		425		32,0					L		8,9	35

Випробування на розтягнення/ Tensile test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності Rp0,2 Yield strength Rp0,2	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 90	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460		355		22				-				
max		760								-				
1241673	2394	565		409		29					L		5	25
1241674	2393	597		438		27					L		5	25

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

Випробування на удар/Impact test API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2 сер.знач./av.	(C42) 3	(C43)	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	L	KV -45°C	18	122	87	107	105		10x10
1241673	2394	T	KV -0°C	27	172	177	194	181		10x10
1241674	2393	L	KV -45°C	18	99	95	114	103		10x10
1241674	2393	T	KV -0°C	27	176	181	175	177		10x10

Випробування на удар/Impact test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2 сер,знач./av.	(C42) 3	(C43)	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	T	KV -52°C	28	133	117	106	119		7.5x10
			KV -52°C	28	143	132	142	139		7.5x10

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 11 MT 129,3 HEAT 1241674 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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No : 2213/4 (A03)
Аркуш / Page 5/5
Дата / Data 13.06.2024

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющення/ Flattening test	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Кільцеве розтягнення/ Ring tensile	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 20.5 MPa / 10 sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length body	Неруйнівний ультразвуковий контроль. Поздовжній розмір надрізу 12,5% на зовнішній та внутрішній поверхні / Nondestructive ultrasonic test. Longitudinal notch with depth 12,5% on external and internal surface	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Остаточний магнетизм/The residual magnetism	не більше 30 Гс/of less than 30 Gs	100%	Задовільно / Satisfactory
Розмір зерна/Grain size	Не більше 7.0 балів (р-р зерна: 8.0)/ Is no more than 7.0 (grain size: 8.0)	100%	Задовільно / Satisfactory

(Z01)
Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
13.06.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Іваненко Дарина Андріївна/Ivanenko Darina

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38(056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

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All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08425	472/11	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/11	24CA08425	1241674

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY PASSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/11	24CA08425	24PR46498	18.92 x 12.26	231.96	50	LM	+ 24	≥ 360 ≤ 530	411	≥ 460 ≤ 760	561	≥ 23.1	33.2	≤0.93	0.73

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALIA WITNESSED NOTED REVIEWED SURVEYOR 26 NOV. 2024 DATE	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07638 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J.	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/11	24CA08425	24PR46497	10x10x55	BLM	-50	≥ 27/27	111	117	125	118									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,74 HEAT 1241673 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ИНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубників,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
Контактна інформація: +38(0562)35-85-07,quality@m.interpipe.biz
LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 1/5
Дата / Data 13.06.2024

Вантажоодержувач/ Consignee (A06.1) T.A.L SPA TUBI ACCIAIO LOMBARDA con socio unico Via G. Di Vittorio 6, 29017 Fiorenzuola d'Arda (PC) , Italy	Контракт №/ Contract # COC24/0868
	Заводське замовлення/Production order # (A08) 640868/101
Країна/ Country (A06.1) Італія/Italy	№ замовлення клієнта/ Customers ref # (A07) PO#OF240243
Транспортний засіб/ Vehicle № AX 3685BO/AX4404XT	Унікальний №/ Unique # 24-003469 (A09)

(B01,B02,B03)	
Стан постачання / Dellivery condition Нормалізовані / Normalized condition	Труби сталеві безшовні гарячекатані для нафтогазопроводів/Seamless steel hot-rolled pipes for oil and gas pipelines
	API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015
	X52N/ L360N/ 6/ P355NL1 TC1
	PSL2
	Труби з фаскою. Обрізка кінців згідно ASME B 16.25 фігура 2A / Pipes will be delivered with beveled ends. BE according to ASME B 16.25, fig. 2A.
	Труби із пластиковими протекторами / Pipes with plastic protectors.
	Труби покриті чорним лаком / Pipes are coated with black varnish

Додаткова інформація/Additional information
Маса фактична. / Actual weight.
Завод сертифікований по PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) / The Mill is PED (Pressure Equipment Directive) 2014/68/EU (appendix 1 exp. 4.3 and 7.5) certified.
Сертифікований ТЮФ Тюринген за AD2000 Merkblatt W4 including paragraph 7, February 2013 та за Директивою 2014/68/EU для ємностей високого тиску; реєстраційний номер сертифікаційного центру 0090. Сертифікат відповідності на систему управління якістю № 31102006 QM15. / Approved acc. to AD2000 Merkblatt W4 including paragraph 7, February 2013 and certified acc. to Pressure Equipment Directive 2014/68/EU by TUV Thuringen e.V.; notified body, reg.-no.0090. Conformance Certificate on Quality Management System № 31102006 QM15.
Без травлення/ Pipes without etching.
Замовлення ґрунтується на вимогах специфікації TS 02 REV.07 13 JULY 2023 та листа відхилень до неї/The order is based on the requirements of the TS 02 REV.07 13 JULY 2023 and its deviation sheet.
Труби відповідають вимогам ASME для котлів та ємностей під тиском, розділ II, частина D, таблиця Y-1. / Pipes are in compliance with ASME Boiler and Pressure Vessel Code, Section II, part D, table Y-1.
Країна виплавки та виробництва - Україна./Country of melt and manufacturer UKRAINE.
Процес виробництва сталі: електросталеплавильне виробництво./ Steel making process: Electric Arc Furnace.
Твердість відповідає вимогам ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015 / Hardness acc. to ANSI/NACE MR0175-2021/ISO 15156-2:2020/ANSI/NACE MR0103/ISO 17945:2015.
Сталь спокійна дрібнозерниста. / Steel is fully Killed and made to fine grain practice.
Вироби піддалися візуальному огляду та контролю розмірів / visual and dimensional test is satisfactory.
Розміри згідно стандарту ASME B36.10M/ Dimensions and weights according to ASME B36.10M.
Відповідність ASME II part.D Tab. Y1/ Compliance with ASME II part.D Tab. Y1.
Сталь, розкислена алюмінієм і виготовлена згідно з технологією виготовлення дрібнозернистої сталі/Steel is Fully Aluminum Killed and made to fine grain practice.
Підтвердження Системи управління контролем якості (QAM) згідно з ISO 9001/Quality Assurance Management (QAM) System Validation according to ISO 9001.
Труби не містять радіаційні елементи./Pipes do not contain radiation elements.

Термообробка/Heat treatment
Нормалізація або нормалізаційна деформація здійснюється при тем-ре 880 грС–1000 грС з наступним охолодженням на повітрі / Normalization or normalization deformation is carried out at a temperature of 880 °C–1000 °C, followed by cooling in air

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,74 HEAT 1241673 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
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Адрес виробництва:
вул.Кештанова,35,м.Дніпро,Україна,49081
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 2/5
Дата / Data 13.06.2024

№ поз. Item No	(B07.4) Номер пакунка Bundle#	(B07.3) Номери труб Pipe#	(B07.1) Номер плавки Heat#	(B07.2) Номер партії Inspection Lot#	(B09) Зовнішній діаметр OD	(B09) Товщина стінки WT	(B010) Довжина Length	(B11) Загальна довжина Total length	(B08) штуки pieces	(B13) Фактична вага Actual weight брутто gross	(B13) нетто net
					мм mm	мм mm	м m	м m		кг kg	кг kg
1	27	10683	1241673	2394	273.0	12.70	10.00-11.80	11,74	1	964	954
2	39	10656	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	958	948
3	40	10679	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	964	954
4	41	10657	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
5	42	10659	1241674	2393	273.0	12.70	10.00-11.80	11,61	1	940	930
6	43	10655	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
7	44	10660	1241674	2393	273.0	12.70	10.00-11.80	11,68	1	954	944
8	33	10666	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
9	34	10663	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	956	946
10	35	10675	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	950	940
11	36	10673	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	958	948
12	37	10658	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	944	934
13	38	10678	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	966	956
14	26	10676	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	948	938
15	28	10664	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	968	958
16	30	10677	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	950	940
17	31	10668	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	968	958
18	32	10669	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	962	952
19	22	10671	1241674	2393	273.0	12.70	10.00-11.80	11,76	1	960	950
20	23	10662	1241674	2393	273.0	12.70	10.00-11.80	11,78	1	962	952
21	24	10672	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	960	950
22	25	10674	1241674	2393	273.0	12.70	10.00-11.80	11,77	1	954	944
		For item/nos.: # 24-003469-011		NPS 10	Sch 60 XS	РАЗОМ/TOTAL		258,58	22	21074	20854
						ПАКУНКІВ/BUNDLES 22					
						Супровідний дерев'яний пакувальний матеріал / Accompanying packaging wooden material				56	
						РАЗОМ ВАНТАЖ/TOTAL CARGO		258,58	22	21130	20854

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR 26 NOV 2024
DATE

Approved by QUALITY1 on 25/06/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,74 HEAT 1241673 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

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(C71) **Хімічний склад по сертифікатним даним на заготівку в % /Heat analysis acc.to the billet manufacturer certificate %**

(B07.1) Номер плавки Heat #	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min	-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max	18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241673	14.3	122.1	17.3	5	15	10.2	12.8	23.2	13	2	67	2	26	0.5	6.3	0.41
1241674	14.8	122.8	19	5	14	10.2	11.4	22.9	11	2	65	2	29	0.5	6.3	0.41

CEV	C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
НД на заготівку/Normative documentation for billets	ТУ №18-2023
Завод виробник/ Plant-manufacturer	"Дніпросталь"/"MP"DNEPROSTEEL"LLC
(C70)	Сталь вироблена методом плавління в електродуговій печі з подальшим безперервним розливом. Сталь повністю розкислена та дрібнозерниста. Сталь розкислена алюмінієм. Заготовка виготовлена з чавуну та сталі на ТОВ «МЗ Дніпросталь» (ЄДРПОУ номер 33718431) за адресою: Україна, м. Дніпро, вул. Дніпросталівська 4/ The steel is produced by melting in an electric arc furnace followed by continuous casting. The steel is fully killed and fine-grained. The steel is killed with aluminium. The billet is made of cast iron and steel at "MP"DNEPROSTEEL"LLC (USREOU number 33718431) at the following address: 4, Dneprostalivska Str., Dnipro, Ukraine.
(C93-C99)	Не містить жодних матеріалів або компонентів, що походять з Росії, Білорусі, окупованих територій України (Крим, Донецька, Луганська, Херсонська, Запорізька області), Ірану, Сирії, Північної Кореї чи будь-якої іншої санкційної юрисдикції. Митний код: заготовка, одержана безперервним литтям, кругла, з нелегованої сталі, з масовою часткою вуглецю менш як 0,25 % - 720719/ Does not contain any materials or components originating from Russia, Belarus, the occupied territories of Ukraine (Crimea, Donetsk, Luhansk, Kherson, Zaporizhzhia regions), Iran, Syria, North Korea or any other sanctioned jurisdiction. Customs code: The billets produced by continuous casting, round, of unalloyed steel with a mass fraction of carbon less than 0.25% – 720719

(C72) **Результати контролю хімічного складу металa труб/Results of chemical analysis of pipes**

(B07.1) Номер плавки Heat #	Номер партії Lot#	(C09.1) зразок Test place	C x100	Mn x100	Si x100	S x1000	P x1000	Cr x100	Ni x100	Cu x100	Mo x1000	Ti x1000	V x1000	Nb x1000	Al x1000	B x1000	N x1000	CEV
min			-	90	15	-	-	-	-	-	-	-	-	-	20	-	-	-
max			18	135	35	8	25	20	30	30	80	40	80	20	60	-	20	0,43
1241674	2393	1	15	123	19	5	12	10	11	23	10	2	64	1	28	0,4	7	41
1241673	2394	2	16	122	17	5	15	10	12	22	12	1	68	1	27	0,5	9	42

Результати випробувань труб - Test results for pipes

Випробування на розтягнення/ Tensile API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності Rt0,5 Yield strength Rt0,5	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 50.8	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of slip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		490		360		14				-				
max		650		530						-				
1241673	2394	565		410		36					L		8,9	35
		570		405		35					L		8,9	35

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
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(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "ИНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубников,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
Контактна інформація: +38(0562)35-85-07,quality@m.interpipe.biz
LIMITED LIABILITY COMPANY "INTERPIPE NIKO TUBE"
Legal address: Trubnykiv Av.,56,Nikopol,Ukraine,53200
Facility address: Kaschtanova Str.,35,Dnipro,Ukraine,49081
Contact information: +38(0562)35-85-07,quality@m.interpipe.biz

ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 4/5
Дата / Data 13.06.2024

1241674	2393	565		420		32,0					L		8,9	35
		575		425		32,0					L		8,9	35

Випробування на розтягнення/ Tensile test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(B07.2) Номер партії Lot#	(C12) Межа міцності Tensile strength Rm	(C12) Межа міцності Tensile strength t= Rm	(C11) Межа плинності Rp0,2 Yield strength Rp0,2	(C11) Межа плинності Yield strength t=	(C13) Відносне подовження Elongation 90	(C13) Відносне подовження Elongation t=	(C15) Відносне звуження Relative narrowing	(C15) Відносне звуження Relative narrowing t=	(C14) Ставлення Rt/Rm Ratio Rt/Rm	(C02) Орієнтація зразків Spesimens orientation*	(C10.1) Ширина смугового зразка Width of stip specimen	(C10.2) Діаметр циліндричного зразка Diameter of cylindrical specimen	(C10.1) Довжина зразка Length of specimen
		МПа	МПа	МПа	МПа	%	%	%	%			мм/mm	мм/mm	мм/mm
min		460		355		22				-				
max		760								-				
1241673	2394	565		409		29					L		5	25
1241674	2393	597		438		27					L		5	25

* L - Поздовжній зразок / Longitudinal specimen; T - Поперечний зразок / transverse specimen

Випробування на удар/Impact test API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	L	KV -45°C	18	122	87	107	105		10x10
1241673	2394	T	KV -0°C	27	172	177	194	181		10x10
1241674	2393	L	KV -45°C	18	99	95	114	103		10x10
1241674	2393	T	KV -0°C	27	176	181	175	177		10x10

Випробування на удар/Impact test EN 10216-2:2013+A1:2019

(B07.1) Номер плавки Heat#	(C00.1) Номер партії Lot#	(C02) Орієнтація зразка Spesimens orientation*	(C40) Тип надрізання, температура Type of notch, temperature	Норматив Norm	Випробування на удар (Ударна в 'язкість) Impact test (Impact strength) (C42) 1	(C42) 2	(C42) 3	(C43) сер.знач./av.	(C44) Площа зсуву Shear area	(C41) Ширина смугового зразка Width of stip specimen
				min	Дж	Дж	Дж	Дж	%	мм/mm
1241673	2394	T	KV -52°C	28	133	117	106	119		7.5x10
			KV -52°C	28	143	132	142	139		7.5x10

* L - поздовжній зразок/Longitudial spesimen; T - поперечний зразок/transverse spesimen
** Результати випробувань зменшених зразків перераховані на повнорозмірні/Non-fullsize specimens results convert to fullsize (10x10mm)

BUREAU VERITAS DALY WITNESSED NOTED SURVEYOR DATE 26 NOV. 2024

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 25/06/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,74 HEAT 1241673 DIMENSIONS 273 x 12,7 ITEM 130

Продукція виготовлена в умовах сертифікованих систем менеджменту якості, навколишнього середовища та безпеки./The products were manufactured in controlled conditions of certified quality, environment and safety management system

(A01)
ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ
"ИНТЕРПАЙП НИКО ТЬЮБ"
Юридична адреса:
пр.Трубников,56,м.Нікополь,Україна,53200
Адрес виробництва:
вул.Каштанова,35,м.Дніпро,Україна,49081
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ІНСПЕКЦІЙНИЙ СЕРТИФІКАТ (A02)
INSPECTION CERTIFICATE
EN 10204-2004/3.1

No : 2213/4 (A03)
Аркуш / Page 5/5
Дата / Data 13.06.2024

Інші види контролю / Other tests

Вид випробування/ Type of test	Параметри/ Criteria		Результати контролю/ Test results
Сплющення/ Flattening test	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Кільцеве розтягнення/ Ring tensile	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Випробування гідравлічним тиском/ Hydrostatic test	100% / 20.5 MPa / 10 sec.	100%	Задовільно / Satisfactory
Неруйнівний контроль тіла труби/ Non-dectructive inspection full length body	Неруйнівний ультразвуковий контроль. Поздовжній розмір надрізу 12,5% на зовнішній та внутрішній поверхні / Nondestructive ultrasonic test. Longitudinal notch with depth 12,5% on external and internal surface	100%	Задовільно / Satisfactory
Візуальний контроль/ Visual inspection	За стандартом / As per Standard	100%	Задовільно / Satisfactory
Контроль геометричних параметрів/ Dimensional inspection	За стандартом/ As per Standard	100%	Задовільно / Satisfactory
Остаточний магнетизм/The residual magnetism	не більше 30 Гс/of less than 30 Gs	100%	Задовільно / Satisfactory
Розмір зерна/Grain size	Не більше 7.0 балів (р-р зерна: 8.0)/ Is no more than 7.0 (grain size: 8.0)	100%	Задовільно / Satisfactory

(Z01)
Труби виготовлені і випробувані відповідно до вимог API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 і замовлення / Pipes were produced and inspected according to requirements of API Spec 5L - 2018/ ASTM A333/A333M-2018/ ASME SA333/SA333M-2023/ EN 10216-3:2013/ ANSI/NACE MR0175-2021/ISO 15156-2:2020/ ANSI/NACE MR0103/ISO 17945:2015 and order's requirements

(A05,Z02,Z03)

Дата/Data	
13.06.2024	Підпис особи, відповідальної за видачу сертифікату /Signature of Certificate ispector Іваненко Дарина Андріївна/Ivanenko Darina

Вказівка в дужках відповідає кодам згідно EN 10168 /Indication in parentheses correspond to sttributes according to EN 10168.

(Z05)
Ваші пропозиції щодо поліпшення продукції просимо надсилати на ел.адресу / Please send Your proposals for improving the product by e-mail or fax or by phone info@ nstp.interpipe.biz www.interpipe.biz Phone: +380 566-630-133 Fax: +380 566-639-379. e-mail: info@ua.interpipe.biz Phone: +38(056)74-74-066 Fax: +38(056)770-20-01 Цей інспекційний сертифікат стосується лише перерахованої в ньому продукції. Неприпустимо внесення змін або інше неправомірне використання сертифіката. /This inspection certificateis only for the listed products. Modification or unauthorized use of the certificate is strictly prohibited. Violations can be considered as forgery and is subject to prosecution

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY1 on 25/06/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.

Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07648 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08435	472/21	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/21	24CA08435	1241673

Doc. Fornito dal cliente Customer's document: **SAMPLING SHEET No. 24/122**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07648 **Data** Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/21	24CA08435	24PR46518	19.00 x 13.19	250.61	50	LM	+ 24	≥ 360 ≤ 530	428	≥ 460 ≤ 760	567	≥ 23.5	34.0	≤0.93	0.75

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm .
Legend: O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07648 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove –** Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/.Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/21	24CA08435	24PR46517	10x10x55	BLM	-50	≥ 27/27	35	33	31	33									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore –** Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da –** Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – PROV. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,35 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/4
B 30476/1
07.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.568 tons - lbs	105.09 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574

Contract 50006380

Dimensions: 273.00 x 12.70 mm
-

Schedule: XS/60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
32	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
819188		Heat analysis		0.14	1.25	0.21	0.002	0.010	0.07	0.06	0.07	0.026	0.01	0.068	0.001	0.002	0.0001	0.0076
819188	24-536	Product analysis		0.13	1.27	0.23	0.002	0.008	0.07	0.06	0.06	0.028	0.01	0.066	0.010	0.002	0.0001	0.0079
819188	24-536	Product analysis		0.14	1.26	0.22	0.002	0.008	0.07	0.05	0.06	0.028	0.01	0.065	0.001	0.002	0.0001	0.0077

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
819188		Heat analysis		3.42	0.069	0.071	0.221	0.38	0.15
819188	24-536	Product analysis		3.54	0.076	0.078	0.218	0.38	0.14
819188	24-536	Product analysis		3.64	0.066	0.068	0.208	0.39	0.14

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 12/09/24

Formular 12A, rev 9

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,35 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30476/1
07.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.568 tons - lbs	105.09 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference	PO NO. : OF240574
Contract	**50006380**

Dimensions: 273.00 x 12.70 mm - Schedule: XS/60 Length: 10.00 - 11.80 m - -

Item	Item Client
32	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
819188	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	24-2036	421.00	-	532.00	-	42.80	0.79
819188	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	24-2036	416.00	-	527.00	-	41.90	0.79
819188	Longitudinal Flat	-	-	20.00	-	13.50	-	270.0	-	24-1142	419.30	-	528.10	-	41.20	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
819188	24-2675	Transversal	10x10x55	0	-	194	218	180	27.0	197	-	-	-	95	100	95	1.73	1.92	1.60
819188	24-2676	Longitudinal	10x10x55	-52	28.0	203	221	234	40.0	219	-	-	-	100	100	100	1.81	1.93	1.99

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
819188	24-1557	-	-	-	-	-	-	-	<20
819188	24-1557	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A, rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 12/09/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,35 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30476/1
07.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
8.568 tons - lbs	105.09 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240574

Contract 50006380

Dimensions: 273.00 x 12.70 mm
-

Schedule: XS/60

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
32	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI)/1000
819188	24-795	450	273.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
819188	24-1984	OK
819188	24-1984	OK

Heat	Microstructure Bulletin No.	Inclusion level max: "z"	Size grain ferritic min. "z"
819188	24-490	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
819188	9	105.09	8568

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE
26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 12/09/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,35 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4 B 30476/1 07.09.2024			ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 8.568 tons - lbs	Total Length: 105.09 meters - feets	Pieces 9	Bundles -
Buyer's reference PO NO. : OF240574	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Contract 50006380	Dimensions: 273.00 x 12.70 mm -		Schedule: XS/60			Length: 10.00 - 11.80 m -		- -	
Item: 32	Item Client: -	Hydro Test: -	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 10 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 12/09/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,45 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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25.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.912 tons - lbs	23.45 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240574
Contract 50006380

Dimensions: 273.00 x 12.70 mm
-
Schedule: XS/60
Length: 10.00 - 11.80 m
-
-
-

Item	Item Client
32	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
819188		Heat analysis		0.14	1.25	0.21	0.002	0.010	0.07	0.06	0.07	0.026	0.01	0.068	0.001	0.002	0.0001	0.0076
819188	24-536	Product analysis		0.13	1.27	0.23	0.002	0.008	0.07	0.06	0.06	0.028	0.01	0.066	0.001	0.002	0.0001	0.0079
819188	24-536	Product analysis		0.14	1.26	0.22	0.002	0.008	0.07	0.05	0.06	0.028	0.01	0.065	0.001	0.002	0.0001	0.0077

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
819188		Heat analysis		3.42	0.069	0.071	0.221	0.38	0.15
819188	24-536	Product analysis		3.54	0.067	0.069	0.209	0.38	0.14
819188	24-536	Product analysis		3.64	0.066	0.068	0.208	0.39	0.14

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 27/09/24

Formular 12A rev 9

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,45 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

Buyer's reference: PO NO. : OF240574

Contract 50006380

Item	Item Client
32	-

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

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25.09.2024

ArcelorMittal

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.912 tons - lbs	23.45 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 273.00 x 12.70 mm
-

Schedule: XS/60

Length: 10.00 - 11.80 m
-

-
-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
819188	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	24-2036	421.00	-	532.00	-	42.80	0.79
819188	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	24-2036	416.00	-	527.00	-	41.90	0.79
819188	Longitudinal Flat	-	-	20.00	-	13.50	-	270.0	-	24-1142	419.30	-	528.10	-	41.20	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
819188	24-2675	Transversal	10x10x55	0	-	194	218	180	27.0	197	-	-	-	95	100	95	1.73	1.92	1.60
819188	24-2676	Longitudinal	10x10x55	-52	28.0	203	221	234	40.0	219	-	-	-	100	100	100	1.81	1.93	1.99

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
819188	24-1557	-	-	-	-	-	-	-	<20
819188	24-1557	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 27/09/24

Formular 12A rev.9

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,45 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30476/2
25.09.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
1.912 tons - lbs	23.45 meters - feets	2	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240574
Contract 50006380

Dimensions: 273.00 x 12.70 mm - | Schedule: XS/60 | Length: 10.00 - 11.80 m - | - -

Item	Item Client
32	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
819188	24-795	450	273.00	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
819188	24-1984	OK
819188	24-1984	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
819188	24-490	0	9

Heat

Heat	Pieces	Length (m)	Weight (kg)
819188	2	23.45	1912

BUREAU VERITAS ITALY
~~APPROVED~~ ~~NOTED~~ REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

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Quality Control Representative

Approved by QUALITY1 on 27/09/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 2 MT 23,45 HEAT 819188 DIMENSIONS 273 x 12,7 ITEM 130

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** according to EN 10204/3.1/2004 -					Page 4/4 B 30476/2 25.09.2024		ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES					Total weight: 1.912 tons - lbs	Total Length: 23.45 meters - feets	Pieces 2	Bundles -
	Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
Buyer's reference PO NO. : OF240574	Dimensions: 273.00 x 12.70 mm -		Schedule: XS/60			Length: 10.00 - 11.80 m -		- -	
Contract 50006380									
Item: 32	Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 10 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 27/09/24

Formular 12A, rev 9

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L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07649 | **Data** Date NOVEMBER, 26/2024 | **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests wilnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08436	472/22	TEST COUPON FROM PIPE O.D. 273 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 273 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/22	24CA08436	819188

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. ~~PIACENZA~~ N. 824 – Prov. PIACENZA

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07649

Data Date NOVEMBER,26/2024 **Pagina** Page 2 **di** of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/22	24CA08436	24PR46520	19.11 x 13.39	255.88	50	LM	+ 24	≥ 360 ≤ 530	387	≥ 460 ≤ 760	523	≥ 23.6	41.2	≤0.93	0.74

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm . O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY PROCESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07649 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA				ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/22	24CA08436	24PR46519	10x10x55	BLM	-50	≥ 27/27	227	239	234	233									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
Legend: F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 1/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
489144		Heat analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0067
489145		Heat analysis		0.14	1.23	0.20	0.002	0.010	0.06	0.05	0.05	0.024	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292		Heat analysis		0.14	1.24	0.21	0.002	0.014	0.02	0.02	0.01	0.032	0.00	0.070	0.002	0.002	0.0005	0.0038
489144	24-700	Product analysis		0.13	1.22	0.19	0.004	0.010	0.05	0.05	0.05	0.025	0.01	0.067	0.003	0.003	0.0001	0.0068
489144	24-700	Product analysis		0.14	1.23	0.20	0.004	0.010	0.06	0.05	0.05	0.026	0.01	0.069	0.003	0.003	0.0001	0.0065
489145	24-699	Product analysis		0.14	1.24	0.20	0.002	0.010	0.06	0.05	0.05	0.025	0.01	0.066	0.003	0.003	0.0001	0.0066
489145	24-699	Product analysis		0.14	1.25	0.21	0.002	0.010	0.06	0.05	0.05	0.026	0.01	0.065	0.003	0.003	0.0001	0.0069
2403292	24-587	Product analysis		0.14	1.23	0.20	0.002	0.010	0.02	0.02	0.01	0.031	0.00	0.070	0.002	0.002	0.0005	0.0036
2403292	24-587	Product analysis		0.15	1.24	0.21	0.002	0.010	0.02	0.02	0.01	0.032	0.00	0.069	0.002	0.002	0.0005	0.0038

BUREAU VERITAS ITALY
ASSESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular.12A rev.9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 2/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm - Schedule: XS/80 - Length: 10.00 - 11.80 m - - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
489144		Heat analysis		3.73	0.070	0.073	0.183	0.37	0.11
489145		Heat analysis		3.48	0.068	0.071	0.191	0.38	0.12
2403292		Heat analysis		8.42	0.072	0.074	0.104	0.37	0.03
489144	24-700	Product analysis		3.68	0.070	0.073	0.183	0.37	0.11
489144	24-700	Product analysis		4.00	0.072	0.075	0.195	0.38	0.12
489145	24-699	Product analysis		3.79	0.069	0.072	0.192	0.38	0.12
489145	24-699	Product analysis		3.77	0.068	0.071	0.191	0.38	0.12
2403292	24-587	Product analysis		8.61	0.072	0.074	0.104	0.37	0.03
2403292	24-587	Product analysis		8.42	0.071	0.073	0.103	0.38	0.03

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A, rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 219.08 x 12.70 mm - | Schedule: XS/80 | Length: 10.00 - 11.80 m - | - -

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
489144	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	24-2620	416.00	-	525.00	-	41.30	0.79
489144	Longitudinal Flat	50.8	-	40.00	-	13.50	-	540.0	-	24-2620	418.00	-	527.00	-	41.70	0.79
489144	Longitudinal Flat	-	-	20.00	-	13.60	-	272.0	-	24-1463	418.00	-	529.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.40	-	536.0	-	24-2620	417.00	-	525.00	-	41.60	0.79
489145	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	24-2620	421.00	-	530.00	-	42.30	0.79
489145	Longitudinal Flat	-	-	20.00	-	13.10	-	262.0	-	24-1463	415.30	-	523.30	-	39.90	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.30	-	532.0	-	24-2620	415.00	-	526.00	-	41.40	0.79
2403292	Longitudinal Flat	50.8	-	40.00	-	13.70	-	548.0	-	24-2620	420.00	-	531.00	-	42.40	0.79
2403292	Longitudinal Flat	-	-	20.00	-	13.30	-	266.0	-	24-1463	416.20	-	526.30	-	40.10	0.79

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
489144	24-3420	Transversal	10x10x55	0	-	204	218	189	27.0	204	-	-	-	100	100	95	1.82	1.92	1.70
489144	24-3421	Longitudinal	10x10x55	-52	28.0	235	215	201	40.0	217	-	-	-	100	100	100	1.98	1.87	1.79
489145	24-3420	Transversal	10x10x55	0	-	195	181	216	27.0	197	-	-	-	95	95	100	1.74	1.62	1.91
489145	24-3421	Longitudinal	10x10x55	-52	28.0	206	221	190	40.0	206	-	-	-	100	100	95	1.83	1.93	1.70
2403292	24-3420	Transversal	10x10x55	0	-	178	193	207	27.0	193	-	-	-	95	95	100	1.61	1.72	1.84
2403292	24-3421	Longitudinal	10x10x55	-52	28.0	197	211	228	40.0	212	-	-	-	95	100	100	1.76	1.87	1.96

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR E.BOTTI DATE 26 NOV. 2024

Approved by QUALITY1 on 06/11/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 4/7
B 30793/2
28.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 219.08 x 12.70 mm
-

Schedule: XS/80

Length: 10.00 - 11.80 m
-

-
-

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
489144	24-2033	-	-	-	-	-	-	-	<20
489144	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
489145	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20
2403292	24-2033	-	-	-	-	-	-	-	<20

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements..

Quality Control Representative

Approved by QUALITY1 on 06/11/24

Formular 12A_rev.9

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -	Page 5/7 **B 30793/2** **28.10.2024**	ArcelorMittal

		Total weight:	Total Length:	Pieces	Bundles
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES	12.835 tons - lbs	198.58 meters - feets	17	4

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference PO NO. : OF240711	Dimensions: 219.08 x 12.70 mm -	Schedule: XS/80	Length: 10.00 - 11.80 m - / -
Contract 50006436			

Item	Item Client
12	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
489144	24-1003	450	283.70	-
489145	24-1003	450	281.10	-
2403292	24-1003	450	279.20	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
489144	24-2512	OK
489144	24-2512	OK
489145	24-2512	OK
489145	24-2512	OK
2403292	24-2512	OK
2403292	24-2512	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
489144	24-645	0	9
489145	24-645	0	9
2403292	24-645	0	9

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

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Approved by QUALITY1 on 06/11/24

ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -		Page 6/7 **B 30793/2** **28.10.2024**	ArcelorMittal	
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES		Total weight: 12.835 tons - lbs	Total Length: 198.58 meters - feets	Pieces: 17 Bundles: 4
Buyer's reference: PO NO. : OF240711 **Contract 50006436**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;				
	Dimensions: 219.08 x 12.70 mm -	Schedule: XS/80	Length: 10.00 - 11.80 m -	-	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
12	-		205	-	20.5	10	-

Heat

Heat	Pieces	Length (m)	Weight (kg)
489144	13	151.74	9808
489145	3	35.06	2266
2403292	1	11.78	761

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

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ROSETTI MARINO S.P.A. P.O.1724002081 122A70C TAL JOB N°324002472
N° 1 MT 11,78 HEAT 2403292 DIMENSIONS 219,1 x 12,7 ITEM 180

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		**MILL TEST CERTIFICATE** **according to EN 10204/3.1/2004** -					Page 7/7 **B 30793/2** **28.10.2024**		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY		SEAMLESS STEEL LINE PIPES					Total weight: 12.835 tons - lbs	Total Length: 198.58 meters - feets	Pieces: 17 Bundles: 4
		Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;							
Buyer's reference: PO NO. : OF240711		Dimensions: 219.08 x 12.70 mm -		Schedule: XS/80			Length: 10.00 - 11.80 m -		- -
Contract 50006436									
Item: 12	Item Client: -	Hydro Test:	Bar: 205	PSI: -	MPa: 20.5	Time(sec): 10	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -		

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX I, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 14 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR E.BOTTI
DATE 26 NOV. 2024

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

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L.P.M. s.n.c.

Di Molinari Vincenzo & C.

LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA
L'ENTE ITALIANO DI ACCREDITAMENTO

LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07650 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 1 **di** of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale Date of material income: 12/11/2024 DDT: 202406408

Oggetto delle prove - – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08437	472/23	TEST COUPON FROM PIPE O.D. 219.1 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 219.1 mm WTH. 12.70 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/23	24CA08437	2403292

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 814 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07650 | Data / Date: NOVEMBER,26/2024 | **Pagina** / Page 2 **di** / of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/23	24CA08437	24PR46522	19.00 x 13.05	247.95	50	LM	+ 24	≥ 360 ≤ 530	368	≥ 460 ≤ 760	503	≥ 23.5	42.6	≤0.93	0.73

Note: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.
Notes:

Legenda: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm;
Legend: FL5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR & BOTH DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA –

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07650 **Data** Date NOVEMBER, 26/2024 **Pagina** Page 3 **di** of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24 KV8** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA					ESPANSIONE LATERALE LATERAL EXPANSION			
						Richiesto Required Media/ Min. Average/ Min	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result %			Media Average	Richiesto Required	Ottenuto Result mm		
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	A	B	C	%	mm	A	B	C
472/23	24CA08437	24PR46521	10x10x55	BLM	-50	≥ 27/27	358	344	326	343									

TEST TEMPERATURE AND REQUIRED VALUES IN ACC. TO SAMPLING SHEET No. 24/122.

Note:
Notes:

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda: Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm;S4: SAMPLED AT 1/4 OF THE THK.;S2: SAMPLED AT 1/2 OF THE THK.; S3: SAMPLED AT 1/3 OF THE THK.;
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY PROCESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

2025/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724002081	122A70C	Q012401023

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

05.12.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000934 **Rev. N°:** 0 **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002471

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
20000	100	323,9X20	Tubi SS CARB. EN10210 1-2/10216-3/10297-1 S355 J2H	10	119,17	VALLOUREC	277443	41460RS23
			Total:	**10**	**119,17**			

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Vallourec Deutschland GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 41460RS23 (A03) Page/Seite: 1 / 5 Date/Datum: 24.03.2023

Please scan this QR Code with your device to access the Vallourec Inspection certificate check site or send an email to valguard@vallourec.com

(A01) **Vallourec Deutschland GmbH**	(A08.1) **Vallourec-Order-No. / Vallourec-Auftrags-Nr./** 276828 (A08.2) **Suborder / Unterauftrag** 84311340
(A06.1) **Consignee / Empfänger** T.A.L. S.p.A TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO 6 I-29017 FIORENZUOLA D'ARDA (PC)	
(A06.2) **Orderer / Besteller** SIDERPIGHI S.P.A. CON SOCIO UNICO / I-29010 PONTENURE (PIACENZA) PC	(A07.2) **Orderer Order-No. / Senderbestellnummer** 22000216 16.12.2022

(B01, B02, B04) **Description of the product** **Erzeugnisbeschreibung**	Hot finished seamless Steel pipes EN 10216-3, TC1, 2013 EN 10210-1, 2006 EN 10297-1, 2003 P355N TC1, EN 10216-3 S355J2H, EN 10210-1 E355 + N, EN 10297-1 Square cut squareness to the tube axis End 1: Plain end square cut, deburred End 2: Plain end square cut, deburred Without inside rust protection Without outside rust protection Nahtlos warmgefertigt Stahlrohre EN 10216-3, TC1, 2013 EN 10210-1, 2006 EN 10297-1, 2003 P355N TC1, EN 10216-3 S355J2H, EN 10210-1 E355 + N, EN 10297-1 Enden senkrecht abgeschnitten Rechtwinkligkeit zur Rohrachse Ende 1: Ende glatt rechtwinklig abgeschnitten, gratfrei Ende 2: Ende glatt rechtwinklig abgeschnitten, gratfrei Ohne Rostschutz innen Ohne Rostschutz außen
(A14) CE 23 0769	The declaration of performance no. 5a is available at www.vallourec.com. Die Leistungserklärung mit der Nr 5a ist auf www.vallourec.com verfügbar.

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

The works operate a Quality Management System according to European Pressure Equipment Directive (PED) 2014/68/EU Annex I Par. 4.3

Approved by QUALITY2 on 24/10/24

Vallourec Deutschland GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr.: : 41460RS23 (A03) Page/Seite: 2 / 5 Date/Datum: 24.03.2023

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Das Werk arbeitet nach einem Qualitätsmanagementsystem gemäß Europäische Druckgeräterichtlinie (PED) 2014/68/EU Anhang I Kap. 4.3 (Z

(B03)
FULLY KILLED-FINE GRAINED
VOLLBERUHIGT-FEINKOERNIG

(A13) Vallourec Item Position	(A09) Orderer Item Position	(B14) Item text Positionstext	(B09) Dimensions Abmessung	(B10) Single length Einzellänge
21			EN 10 216-3 OD 323,9 x WT 20 mm OD Tol ± 1 % WT Tol : -10 %, localised -12.5 % allowed, + 12.5 % EN 10 216-3 AD 323.9 x WD 20 mm AD Toleranz ± 1 % Wanddickentoleranz : -10 %, örtlich bis -12.5 % erlaubt, + 12.5 %	Limited length from 11000 to 12500 mm Without short length Limitierte Längen von 11000 bis 12500 mm Ohne Unterlängen

(A13) Vallourec Item Position	(A09) Orderer Item Position	(B08) Quantity Stück P	(B11) Total length Gesamtlänge m	(B13) Weight Gewicht kg
21		11	130.85	19 600

Vallourec Item Position	Delivery Note-No Lieferschein-Nr.	Packing list-No Packlisten-Nr.
21	1931	

(C71)
HEAT CHEMICAL ANALYSIS / SCHMELZANALYSE

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY2 on 24/10/24

Vallourec Deutschland GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 41460RS23 (A03) Page/Seite: 3 / 5 Date/Datum: 24.03.2023

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(C71)

HEAT CHEMICAL ANALYSIS / SCHMELZANALYSE

(B07.1) Heat / Schmelze	(B15) Process / Erschmelz.	C %	Si %	Mn %	P %	S %	Al (Al tot) %	Cu %	Cr %	Ni %	Mo %
min	-	-	-	0.90	-	-	0.020	-	-	-	-
max	-	0.200	0.500	1.60	0.025	0.0200	-	0.300	0.300	0.500	0.080
277110	Oxygen (BOF)	0.150	0.310	1.27	0.013	0.0010	0.031	0.140	0.050	0.160	0.010
277443	Oxygen (BOF)	0.150	0.320	1.29	0.010	0.0010	0.033	0.120	0.020	0.160	0.010

(B07.1) Heat / Schmelze	V %	Ti %	Nb(Cb) %	N %	CQ 03 %	EF 02 %	EF 28 %					
min	-	-	-	-	-	-	-					
max	0.100	0.040	0.050	0.0200	.47	0.12	0.45					
277110	0.060	0.008	0.014	0.0070	.41	0.08	0.20					
277443	0.070	0.009	0.015	0.0090	.40	0.09	0.15					

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
EF 02	EF = V + TI + NB
EF 28	EF = CR + MO + CU

Heats fully killed
Beruhigter Stahl

AL : N >2.

TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

Type / Form (C10.1)	ROUND TEST SPECIMEN / RUNDPROBE
Test temperature / Prüftemperatur (C03)	ROOM TEMPERATURE / RAUMTEMPERATUR
Direction / Richtung (C02)	transverse / quer

BUREAU VERITAS ITALY
ACCEPTED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY2 on 24/10/24

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ROSETTI MARINO S.P.A. P.O. 1724002081 122A70C TAL JOB N°324002471 OUR DDT N°2024DI0260 OF 21/11/24
N° 10 MT 119,17 HEAT 277443 DIMENSIONS 323,9 x 20 ITEM 100

Vallourec Deutschland GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 41460RS23 (A03) Page/Seite: 4 / 5 Date/Datum: 24.03.2023

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TENSILE TEST RESULTS / ERGEBNISSE DES ZUGVERSUCHS

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C10) Diameter Durchmesser	(C11) YS Streckgr.	(C12) TS Zugfest.	(C13) Elong. Dehnung	(C14.1) Ratio Verhältn.					
		mm	ReH MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -					
min		-	355	490	20.0	-					
max		-	-	630	-	-					
277110	2151A	06.00	395	541	33.0	0.73					
277443	2103A	06.00	398	540	33.0	0.74					

IMPACT TEST RESULTS / ERGEBNISSE DES KERBSCHLAGBIEGEVERSUCHS

Type / Form (C40)	Charpy-V / Charpy-V
Test temperature / Prüftemperatur (C03)	- 20 DEGREES C
Direction / Richtung (C02)	transverse / quer

(B07.1) Heat Schmelze	(C00.1) Test Piece Prüfstück	(C41)	(C42.1) Impact1 Arbeit1	(C42.1) Impact2 Arbeit2	(C42.1) Impact3 Arbeit3	(C43.3) Mean Mittelw.					
		qcm	J	J	J	J					
min		-	19.0	19.0	19.0	27.0					
max		-	-	-	-	-					
277110	2151A	0.800	186	165	178	176					
277443	2103A	0.800	146	155	155	152					

(D55)

OTHER TESTS ON PIPE / SONSTIGE PRUEFUNGEN

Test Prüfung	Conditions Prüfbedingungen	Test rate Prüfumfang	Result Ergebnis
HEAT TREATMENT WAERMEBEHANDLUNG	NORMALIZED NORMALISIERT	19 MIN 920 DEGREES C AIR 19 MIN 920 GRAD C LUFT	
HYDROSTATIC TEST INNENDRUCKVERSUCH MIT WASSER	70 BAR (1BAR=100KPA), HOLDING TIME 5 SEC. 70 BAR (1BAR=100KPA), HALTEZEIT 5 SEC.	EACH PIPE/ TUBE JE ROHR	NO LEAKAGE BESTANDEN
FLATTENING TEST RINGFALTVERSUCH			SATISFACTORY BESTANDEN
APPEARANCE AND DIMENSIONS (D01) OBERFLAECHENBESCHAFFEN-HEIT UND MASSE (D01)		EACH PIPE/ TUBE JE ROHR	SATISFACTORY BESTANDEN

(A04, B06)

MARKING, IDENTIFICATION / KENNZEICHNUNG, IDENTIFIKATION

BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY2 on 24/10/24

Vallourec Deutschland GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 DÜSSELDORF GERMANY	vallourec	INSPECTION CERTIFICATE (A02) ABNAHMEPRUEFZEUGNIS 3.1 EN 10204:2004 No. / Nr. : 41460RS23 (A03) Page/Seite: 5 / 5 Date/Datum: 24.03.2023

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(A04, B06)

MARKING, IDENTIFICATION / KENNZEICHNUNG, IDENTIFIKATION

VALLOUREC	CONTINUOUSLY PAINT STENCILED VALLOUREC LOGO VALLOUREC VAD41 TERMS OF DELIVERY EN10216-3 10210-1 10297-1 323.9 20MM P355NTC1/S355J2H/E355+N HEAT-NO. PIPE NO. (TALLY-NR.) MILL REFERENCE ORDER NO. 84311340 N WA 276828 VLR ITEM-NO 21 COUNTRY OF ORIGIN GERMANY
VALLOUREC	FORTLFD. SCHRIFTMARKIERUNG VALLOUREC LOGO VALLOUREC VAD41 LIEFERBED./SPEZIFIKATION: EN10216-3 10210-1 10297-1 323.9 20MM P355NTC1/S355J2H/E355+N SCHMELZEN-NR. LFD. ROHR-NR. WERKS-REFERENZAUFTRAGSNR. 84311340 N WA 276828 POSITIONS-NR. 21 URSPRUNGSLAND GERMANY

(Z01)

The supplied products are in compliance with the requirements of the order

Die gelieferten Erzeugnisse stimmen mit den Anforderungen des Auftrages überein

(A05, Z02, Z03)

Date Datum	Validated by Bestätigt durch	Signature Unterschrift	Contact details Kontaktdaten	Stamp Stempel
24.03.2023	Inspection Representative Abnahmebeauftragter	MURAT DOGAN	☎ +49(0)2119603852 @ CERTIFICATES-RS-PLUG@VALLOUREC.COM	

Indication in parenthases correspond to attributes according to EN 10168

Die Bezeichnungen in Klammern entsprechen den Kennnummern gemäss EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

Dieses Zeugnis bzw. diese Bescheinigung darf weder verändert noch für andere Erzeugnisse verwendet werden. Zuwiderhandlungen werden als Urkundenfälschung und Betrug strafrechtlich verfolgt.

BUREAU VERITAS
ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by QUALITY2 on 24/10/24

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07574 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 1 di / of 3

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente / Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente / Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo / Technical specification: UNI EN 10210-1:2016 // UNI EN 10216-3:2014 // UNI EN 10297-1:2003

Data ingresso materiale / Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione / Sample No.	ID Cliente / Customer ID	Descrizione – Description
24CA08414	471/1	TEST COUPON FROM PIPE O.D. 323.8 mm, THK. 20 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente / Cust. Item	Q.tà / Q.ty	Tipo del prodotto – Type of the product	Materiale / Material	ID Cliente / Customer ID	No. Campione / Sample No.	No. di colata / Heat No.
1	-	1	PIPE O.D. 323.8 THK. 20 mm	UNI EN 10210-1:2006 S355J2H UNI EN 10216-3:2014 P355N UNI EN 10297-1:2003 E355	471/1	24CA08414	277443

Doc. Fornito dal cliente / Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
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Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07574 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 2 di / of 3

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **UNI EN ISO 6892-1:2020** | **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El%	
								ReH Richiesto Required	ReH Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%
471/1	24CA08414	24PR46476	20.05 x 20.41	409.22	115	TB	+ 24	≥ 355	393	≥ 490 ≤ 650	540	≥ 20	27.7

Legenda – Legend: E: EXTRADOS; I: INTRADOS; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Note – Notes: REQUIRED VALUES ACC. TO UNI EN 10216-3:2014.

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07574 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 3 di / of 3

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **UNI EN ISO 148-1:2016 KV2** | Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min. Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
471/1	24CA08414	24PR46475	10x10x55	LB	-20	≥ 40	155	160	168	161				-	

Note – Notes: **TEST TEMPERATURE AND VALUES ACC. TO UNI EN 10216-3:2014.**

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: **B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ REVIEWED SURVEYOR DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 1 di / of 4

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
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In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

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All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente / Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente / Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo / Technical specification: ASTM A333/A333M-24 // API 5L 46th Ed.

Data ingresso materiale / Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione / Sample No.	ID Cliente / Customer ID	Descrizione – Description
24CA08415	472/1	TEST COUPON FROM PIPE O.D. 508 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente / Cust. Item	Q.tà / Q.ty	Tipo del prodotto – Type of the product	Materiale / Material	ID Cliente / Customer ID	No. Campione / Sample No.	No. di colata / Heat No.
1	-	1	PIPE O.D. 508, THK. 26.19 mm	ASTM A333/A333M-24 Gr.6 API 5L 46th Ed. X52 PSL2	472/1	24CA08415	899743

Doc. Fornito dal cliente / Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR F. BOTTI DATE 26 NOV. 2024	E.FERRI	DOTT. ING. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo & C.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628

Data / Date: NOVEMBER,26/2024

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **ASTM A370-24**

Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El		YS/TS	
								Rp 0,2 Richiesto Required	Rp 0,2 Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%		
472/1	24CA08415	24PR46478	Ø 12.43	121.35	50	TM	+ 24	≥ 360 ≤ 530	371	≥ 460 ≤ 760	542	≥ 20.6	30.0	≤0.93	0.68

Note:
Notes: REQUIREMENTS ACC. TO API 5L 46th Ed. X52 PSL2.

Legenda:
Legend: B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; FL : FUSION LINE; FL2 : FUSION LINE + 2mm; FL5: FUSION LINE +5 mm . O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Cliente – Customer	Ispettore – Inspector	Resp. Lab. – Lab. Manager	Approvato da – Approved by
	SHEAU VERITAS ITALY PASSED ~~NOTED REVIEWED~~ SURVEYOR F.BOTTI DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 | Data Date NOVEMBER, 26/2024 | Pagina Page 3 di of 4

Risultati prova di trazione attraverso lo spessore – Tensile test through the thickness results

Metodo di prova – Test method: **UNI EN 10164:2018** | Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT Lc	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		STRIZIONE REDUCTION OF AREA Z		
								Rp 0,2% Richiesto Required	Rp 0,2% Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required AVE./MIN.	Ottenuto Result	Media Average
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%	%
472/1	24CA08415	24PR46529	Ø 6.00	28.27	9	Z	+ 22	INFO	328	INFO	564	-	68	
472/1	24CA08415	24PR46530	Ø 5.98	28.09	9	Z	+ 22	INFO	330	INFO	569	-	66	65
472/1	24CA08415	24PR46531	Ø 5.97	27.99	9	Z	+ 22	INFO	331	INFO	564	-	64	

Note:
Note:

Legenda: / Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; S4: SAMPLET AT 1/4 OF THE THK.
L: LONGITUDINAL; T: TRANSVERSAL; Z: THROUGH THE THICKNESS.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY ~~PROCESSED NOTED REVIEWED~~ SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824

L.P.M. s.n.c.
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ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07628 Data / Date NOVEMBER, 26/2024 Pagina / Page 4 di / of 4

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **ASTM A370-24** **Data delle prove** – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
472/1	24CA08415	24PR46477	10x10x55	LB	-50	≥27/27	162	158	141	154	-			-	

Note – Notes: **TEST TEMPERATURE AND VALUES ACC. TO SAMPLING SHEET No. 24/122.**

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: **B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.**

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 – Prov. PIACENZA

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724002081	122A70	Q012401137

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emilia 20.01.2025

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

ROSETTI MARINO S.P.A. P.O. 1724002081 122A70C REV.2 TAL JOB N°325000090 OUR DDT N°202500267 OF 16/01/25
N° 2 MT 20,82 HEAT 2403323 DIMENSIONS 323,8 x 21,44

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TE ST CE RTIFICATE

according to EN 10204/3.1/2004

-

Page 1/4

B 30795/1

25.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico

VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.636 tons - lbs	60.28 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711

Contract 50006436

Dimensions: 323.80 x 21.44 mm
-

Schedule: 100

Length: 9.00 - 11.50 m
-

-
-

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.18	1.30	0.35	0.008	0.020	0.20	0.30	0.30	0.060	0.08	0.080	0.020	0.040	0.0010	0.0200
			Min	-	-	0.15	-	-	-	-	-	0.020	-	0.060	-	-	-	-
2403323		Heat analysis		0.14	1.23	0.19	0.002	0.011	0.01	0.02	0.01	0.031	0.00	0.064	0.001	0.002	0.0004	0.0040
2403323	24-555	Product analysis		0.13	1.25	0.21	0.003	0.010	0.05	0.07	0.08	0.027	0.02	0.064	0.002	0.002	0.0001	0.0088
2403323	24-555	Product analysis		0.14	1.25	0.20	0.003	0.009	0.05	0.06	0.07	0.026	0.02	0.064	0.002	0.002	0.0001	0.0087

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	Cr + Mo + Cu + Nb + V + Ti	CE_IIW	Cr + Mo + Cu
			Max	-	0.100	0.120	0.600	0.41	0.45
			Min	2.00	-	-	-	-	-
2403323		Heat analysis		7.75	0.065	0.067	0.093	0.36	0.03
2403323	24-555	Product analysis		3.07	0.066	0.068	0.218	0.38	0.15
2403323	24-555	Product analysis		2.99	0.066	0.068	0.208	0.38	0.14

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Formular 12A rev 9

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

B 30795/1
25.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.636 tons - lbs	60.28 meters - feets	6	-

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Buyer's reference: PO NO. : OF240711
Contract 50006436

Dimensions: 323.80 x 21.44 mm - Schedule: 100 - Length: 9.00 - 11.50 m - -

Item	Item Client
25	-

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2 -

Tensile Test

Heat	Orientation	Length mm	Length inch	Width/Diameter mm	Width/Diameter inch	Thickness mm	Thickness inch	Section mm²	Section inch²	Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-2066	404.00	-	516.00	-	37.30	0.78
2403323	Longitudinal Round	50.8	-	12.50	-	0.00	-	122.7	-	24-2066	401.00	-	515.00	-	36.80	0.78
2403323	Longitudinal Round	-	-	10.00	-	0.00	-	78.5	-	24-1172	397.50	-	515.90	-	34.10	0.77

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
2403323	24-2696	Transversal	10x10x55	0	-	177	191	205	27.0	191	-	-	-	95	95	100	1.60	1.71	1.82
2403323	24-2697	Longitudinal	10x10x55	-52	28.0	224	210	197	40.0	210	-	-	-	100	100	95	1.95	1.87	1.76

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.- OD	HV 10 max.- Midwall	HV 10 max.- ID	HV 10 max.- End A	HV 10 max.- End B	HRC max.22
2403323	24-1587	-	-	-	-	-	-	-	<20
2403323	24-1587	-	-	-	-	-	-	-	<20

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR, BL 15, SC. A, PARTER I
ROMAN, NEAMT ROMANIA

MILL TEST CERTIFICATE
according to EN 10204/3.1/2004
-

Page 3/4
B 30795/1
25.10.2024

ArcelorMittal

Buyer: T.A.L. S.P.A.con socio unico
VIA G. DI VITTORIO, 6, ZONA IND., 29017
FIORENZUOLA D'ARDA (PIACENZA)
ITALY

SEAMLESS STEEL LINE PIPES

Total weight:	Total Length:	Pieces	Bundles
9.636 tons - lbs	60.28 meters - feets	6	-

Buyer's reference: PO NO. : OF240711
Contract 50006436

Standard: API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;

Dimensions: 323.80 x 21.44 mm
-

Schedule: 100

Length: 9.00 - 11.50 m
-

-
-

Item	Item Client
25	-

Hydro Test:

Bar	PSI	MPa	Time(sec)
205	-	20.5	10

Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
-

Yield Strength Test

Heat	Yield Strength Bulletin No.	T °C	YS (MPa)	YS (PSI):1000
2403323	24-825	450	267.10	-

Technological/Microstructure Test

Heat	Flattening Test Bulletin No.	Flattening Test
2403323	24-1995	OK
2403323	24-1995	OK

Heat	Microstructure Bulletin No.	Inclusion level max. "z"	Size grain ferritic min. "z"
2403323	24-501	0	10

Heat

Heat	Pieces	Length (m)	Weight (kg)
2403323	6	60.28	9636

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 06/11/24

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA	**MILL TE ST CE RTIFICATE** **according to EN 10204/3.1/2004** -						Page 4/4 **B 30795/1** **25.10.2024**		ArcelorMittal
Buyer: T.A.L. S.P.A.con socio unico VIA G. DI VITTORIO, 6, ZONA IND., 29017 FIORENZUOLA D'ARDA (PIACENZA) ITALY	SEAMLESS STEEL LINE PIPES						Total weight: 9.636 tons - lbs	Total Length: 60.28 meters - feets	Pieces: 6 Bundles: -
Buyer's reference: PO NO. : OF240711 **Contract 50006436**	**Standard:** API 5L ED.46-2018-PSL2; ASME SA 333/SA 333M-2023; ASTM A 333/A 333M-2024; EN 10216-3-2014; TS 02 Rev 07/13.07.2023 with deviation as per Technical Offer no.9/17.07.2023; ASME B16.25-2022; ASME II part D Table Y1; ANSI/NACE MR 0103/ISO 17945-2015; ANSI/NACE MR0175/Part 1 & 2 -2021/ISO 15156-2020;								
	Dimensions: 323.80 x 21.44 mm -		Schedule: 100				Length: 9.00 - 11.50 m -		-

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: L360N/X52N/6/P355NL1TC1-PSL2
25	-		205	-	20.5	10	-

Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3. & 7.5
"Issued in agreement with TÜV SÜD Industrie Service GmbH (07.2008)"
"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"
"(Certification no. DGR-0036-QS-W 361/2008/MUC)"
Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, produced by electric furnace, source Jindal Shadeed Iron & Steel LLC Sohar Port, Plot - 12, PO Box 404, PC 322 Falaj Al Qabail, Sohar, Sultanate of Oman .
Visual inspection and dimensional check without objection.
Heat treatment: normalizing at temperature: 890-940°C, time soaking 20 min.
Electromagnetic automated inspection Le + Li (12.5 % from W.T.) - satisfactory.
Pipe ends that were not automatically checked were cut.
Residual magnetism check less than 30 Gauss-satisfactory.
Hydrostatic test hold for 10 sec. no leakage noticed.
„Free from radioactive contamination".
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Approved by QUALITY1 on 06/11/24

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDIA SPA	1724002081	122A70C	Q012401024

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

05.12.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Tubi Acciaio Lombarda S.p.A.

INSPECTION REPORT

Customer: ROSETTI MARINO S.P.A.

N° Insp.Report: 00000000000000000936 **Rev. N°:** 0 **Date:**

Inspection Date: 26/11/2024

Ref.: 1724002081 122A70C

Our Job n. 324002520

Responsibility Center FIORENZUOLA

Notes on Inspection:

List of materials and mill test certificates

Item No.	Cust. Item	Size (mm)	Material	Pipes	M.	Manufacturer	Heats	N° M.T.C.
10000	10	508X40	Tubi SS EN10210 1/2 EN10297-1-EN10216-3 S355J2H					
				1	4,98	HUTA BATORY	900120	2827/2024/AH
				1	4,97	HUTA BATORY	900120	2827/2024/AH
				1	4,91	HUTA BATORY	900120	2827/2024/AH
			Total:	**3**	**14,86**			

BUREAU VERITAS ITALY
WITNESSED ~~NOTED~~ ~~REVIEWED~~
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico
VIA G. DI VITTORIO, 6 - ZONA INDUSTRIALE - 29017 FIORENZUOLA D'ARDA (PC)
PHONE +39 0523/985911 - FAX +39 0523/985900 - INTERNET: http://tal.it - E-MAIL: info@tal.it

ROSETTI MARINO S.P.A. P.O. 1724002081 122A70C TAL JOB N°324002520 OUR DDT N°202406656 OF 21/11/24
N° 3 MT 14,86 HEAT 900120 DIMENSIONS 508 x 40 ITEM 10

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. OF240699 SIDERPIGHI JOB N°24003852 OUR DDT N°24004433 OF 21/10/24
N° 2 MT 9,95 HEAT 900120 DIMENSIONS 508 x 40

alchemia

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 2827/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2004 type 3.1

/nr normy/ Strona Page Page Seite Страница 1/2

CORRECTION

(A10÷A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Stahl Manufacturer-Stahlhersteller- Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A06) **Zamawiający** SIDERPIGHI SPA CON SOCIO UNICO ITALY
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** VIA EMILIA PARMENSE 15 I - 29010 PONTENURE - PC
Adresse-Address-Versandadreesse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werkauftragsnummer Приказ №
24000189	H2400774/9/1 152754,152755

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes. Made in acc. to EN 10216-3/13-TC1/ EN 10210-1/06/EN 10297-1/03/ Melting process - E. Fully killed. Fine grain practice. Dimensions acc.to EN 10220/EN 10210-2, Normalized 910°C/80'. Raw material and end product of Polish origin. CN code: 7304 39 88 00.	(B09) 508 x 40 mm 3,5 - 5 m	(B02) S355J2H/ S355NH/ P355NL E355K2	(B07) 900120	(B08) 8	(B15) 38,96	(B13) 18306

UK CA
0829 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul.Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR--EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCA/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul.Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0858
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. **SKŁAD CHEMICZNY** - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
heat analysis	0,15	1,20	0,21	0,008	0,004	0,09	0,09	0,18
product analysis	0,18	1,21	0,22	0,007	0,005	0,09	0,09	0,19
product analysis	0,18	1,21	0,22	0,007	0,005	0,09	0,09	0,18
(B07) 900120	Mo	V	Al	Ti	N	Nb	B	Ceq
heat analysis	0,02	0,05	0,031	0,001	0,009	0,001	0,0003	0,40
product analysis	0,02	0,05	0,027	0,001	0,014	0,001	0,0003	0,43
product analysis	0,02	0,05	0,028	0,001	0,014	0,001	0,0003	0,43

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by CFERMI on 23/10/24

Approved by QUALITY2 on 24/10/24

SIDERPIGHI SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. OF240699 SIDERPIGHI JOB N°24003852 OUR DDT N°24004433 OF 21/10/24
N° 2 MT 9,95 HEAT 900120 DIMENSIONS 508 x 40

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN – МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No No плавки или пробы	$R_{p0,2}$ MPa min 345	R_{eH} MPa min 345	Rm MPa 490 630	A5 % min 22,0	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-20°C KV(10x10mm) (L) min 40J/-20°C (C40,C41,C02) Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единичный результат	Średnia Moyenne Mean Mittel Среднее	Twardość Dureté Hardness Härte Твердость (C30)	MPa min
(B07,C02,C00)	(C11)	(C11)	(C12)	(C13)	(C42)	(C43)	(C31)	(C50-C69)
900120/12959 Longitudinal	357	364	530	35,2	141 - 140 - 140 154 - 141 - 154	140 150		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ (D51-D99) (Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Ring tensile test - positive results

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été controlés et 100% - Surface and dimensions tested at 100% Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания (Z05-Z99)

Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials in acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl

(Z01)Niniejszym potwierdzam, że wyżej wymieniony materiał został zbadany i spełnia warunki potwierdzenia zamówienia - Par la presente je confirme que le matériel susmentionne a ete examine et il remplit les conditions de la confirmation de commande. - We hereby certify, that the material described above has been tested and complies with the terms of the order. - Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht. - Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора.

(D01)Cechowanie – Marquage – Marking –Kennzeichnung – Обозначен

Manufacturer's Mark/ EN 10216-3/ P355N/TC1/EN 10210/ S355J2H/S355NH/ EN 10297-1/ E355K2/ Heat No/ Technical Inspector's Mark

(D51-D99)Na podstawie wyżej przeprowadzonych prób material zwolniono – Sur la base des essais si-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеименованных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufactur Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
Z-ca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 26.09. 2024 r. 2827/2024/AH Strona Page Page Seite Страница 2/2

KJ 21634

ALCHEMIA S.A. ITALY WITNESSED NOTED REVIEWED SURVEYOR F. BOTTI DATE 26 NOV. 2024

Approved by CFERMI on 23/10/24

Approved by QUALITY2 on 24/10/24

SIDERPIGHI SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ROSETTI MARINO S.P.A. P.O. 1724002081 122A70C TAL JOB N°324002520 OUR DDT N°202406656 OF 21/11/24
N° 3 MT 14,86 HEAT 900120 DIMENSIONS 508 x 40 ITEM 10

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. OF240699 SIDERPIGHI JOB N°24003852 OUR DDT N°24004433 OF 21/10/24
N° 1 MT 0,25 HEAT 900120 DIMENSIONS 508 x 40

alchemia

ALCHEMIA S.A.
Oddział Walcownia Rur Batory
w Chorzowie
ul. Dyrekcyjna 6
41-506 Chorzów
POLAND
(A01)(A04)

(A03)

ŚWIADECTWO ODBIORU No 2827/2024/AH

CERTYFICAT DE RECEPTION INSPECTION CERTIFICATE
ABNAHMEPRÜFZEUGNIS СЕРТИФИКАТ

(A02) Acc. to EN 10204:2004 type 3.1

/nr normy/ Strona Page Page Seite Страница 1/2

CORRECTION

(A19÷A99)
Wytwórca Stali - Fabricant d'acier-Steelmaker-Steel Manufacturer-Stahlhersteller - Производитель стали
ALCHEMIA S.A. Oddział Stalownia Batory, ul.Dyrekcyjna 6; 41-506 Chorzów

(A05) **Zamawiający** SIDERPIGHI SPA CON SOCIO UNICO ITALY
Acheteur-Customer-Besteller-Заказчик

(A06) **Adres wysyłkowy** VIA EMILIA PARMENSE 15 I - 29010 PONTENURE - PC
Adresse-Address-Versandadresse-Адрес получателя

(A07) Nr zamówienia klienta Numéro de la commande du client Purchaser's order No Kundenbestellnummer No заказа	(A08,09) Nr potwierdzenia No de la commande Manuf. Order No Werkauftragsnummer Приказ №
24000189	H2400774/9/1 152754,152755

Wyszczególnienie zamówienia:
Specyfication de la commande-Order Specification-Spizifikation der Bestellung-Спецификация заказа

Wyrób i wymagania dodatkowe (stan obr. termicz.,mech. itp.) Produit et prescriptions supplémentaires (traitement thermique et l'usinage) Product and any supplementary requirements (Heat and mechanical treatment etc.) Erzeugnis und Zusätzliche Anforderungen (therm und mechan. Bearbeitung usw.) Продукта и дополнительные требования (состояние терм. и механобраб. и пр.)	Wymiar wyrobu Dimensions du produit Product dimensions Masse des Erzeugnisses Размер продукта	Oznaczenie stali Désignation del'acier Steel designation Stahlbezeichnung Марка стали	Wytop Coulée Heat Abstich Плавка	Sztuk Pièces Pieces Stück Штук	mb ft (c. mtr.) c. mtr. l. M. пог. м	kg lb (kg) кг
(B01,B03) Hot rolled seamless steel pipes. Made in acc. to EN 10216-3/13-TC1/ EN 10210-1/06/EN 10297-1/03/ Melting process - E. Fully killed. Fine grain practice. Dimensions acc.to EN 10220/EN 10210-2. Normalized 910°C/80'. Raw material and end product of Polish origin. CN code: 7304 39 88 00.	(B09) 508 x 40 mm 3,5 - 5 m	(B12) S355J2H/ S355NH/ P355N/ E355K2	(B07) 900120	(B08) 8	(B15) 38,96	(B13) 18306

UK CA
0879 (Z05-Z99)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul.Dyrekcyjna 6 41-506 Chorzów POLEN
22
0879-CPR--EN10210-1-PL00002
BS EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance UKCA/HBT/BS EN10210/25/04/2023 is available on www.alchemiasa.pl

CE
0045
(Z04)
ALCHEMIA S.A Oddział Walcownia Rur Batory w Chorzowie, ul. Dyrekcyjna 6 41-506 Chorzów POLEN
06
0045-CPR-0888
EN 10210:2006
Structural Steel Hollow Sections to be used in metal structures or in composite metal and concrete structures. Declaration of performance CPR/HBT/EN 10210/16/07/2020 is available on www.alchemiasa.pl

Kontrolę techniczną powyższego zamówienia przeprowadził Oddział Technicznej Kontroli. Wyniki badań podano niżej.
Le controle technique de la été exécute par le Service de Controle. Les resultats des essais sont indiqués ci-aprés.
The technical investigation of this order has been executed by the Works Control. Results of tests are as follows.
Die technische Prüfung obiger Bestellung wurde von der Fabrikationskontrolle durchgeführt. Die Ergebnisse der Proben sind nachstehend angeführt.
Технический контроль вышеупомянутого заказа произвел Отдел Технического Контроля. Результат испытания представлен ниже.

1. SKŁAD CHEMICZNY - COMPOSITIO CHIMIQUE – CHEMICAL COMPOSITION – CHEMISCHE ZUSAMMENSETZUNG
(C71-C92) ХИМИЧЕСКИЙ СОСТАВ

Wytop Coulée Heat Abstich Плавка	C	Mn	Si	P	S	Cr	Ni	Cu
heat analysis	0,15	1,20	0,21	0,008	0,004	0,09	0,09	0,18
product analysis	0,18	1,21	0,22	0,007	0,005	0,09	0,09	0,19
product analysis	0,18	1,21	0,22	0,007	0,005	0,09	0,09	0,18
(B07) 900120	Mo	V	Al	Ti	N	Nb	B	Ceq
heat analysis	0,02	0,05	0,031	0,001	0,009	0,001	0,0003	0,40
product analysis	0,02	0,05	0,027	0,001	0,014	0,001	0,0003	0,43
product analysis	0,02	0,05	0,028	0,001	0,014	0,001	0,0003	0,43

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
26 NOV. 2024

Approved by CFERMI on 23/10/24

Approved by QUALITY2 on 24/10/24

SIDERPIGHI SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

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ROSETTI MARINO S.P.A. P.O. 1724002081 122A70C TAL JOB N°324002520 OUR DDT N°202406656 OF 21/11/24
N° 3 MT 14,86 HEAT 900120 DIMENSIONS 508 x 40 ITEM 10

T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA c/ socio unico P.O. OF240699 SIDERPIGHI JOB N°24003852 OUR DDT N°24004433 OF 21/10/24
N° 1 MT 0,25 HEAT 900120 DIMENSIONS 508 x 40

2. BADANIA MECHANICZNE – ESSAIS MECANIQUES – MECHANICAL TESTS – MECHANISCHE UNTERSUCHUNGEN
МЕХАНИЧЕСКИЕ ИСПЫТАНИЯ

Nr wytopu lub próby No de la coulée ou De l'eprouvette Heat No Or. Tests No Abstich Oder Probe No № плавки или пробы	$R_{p0,2}$ MPa min	R_{eH} MPa min	Rm MPa	A5 %	Badanie udarności Impact Impact test Kerbschlagprobe Испытание на удар acc. to EN ISO 148 - 1 KV(10x10mm) (T) min 27J/-20°C KV(10x10mm) (L) min 40J/-20°C (C40,C41,C02)		Twardość Dureté Hardness Härte Твердость (C30)	MPa min
					Wartość pojedyncza Valeurs individuelles Individual values Einzelwerte Единственный результат	Średnia Moyenne Mean Mittel Средний		
(B97.C02.C00)	(C11)	(C11)	(C12)	(C13)	(C42)	(C43)	(C31)	(C50-C69)
900120/12959 Longitudinal	357	364	530	35,2	141 - 140 - 140 154 - 141 - 154	140 150		

3. INNE BADANIA – AUTRES ESSAIS – OTHER TESTS – ANDERE UNTERSUCHUNGEN – ДРУГИЕ ИСПЫТАНИЯ
(D51-D99)

(Z04)

BADANIA TECHNOLOGICZNE – ESSAIS TECHNOLOGIQUES – TECHNOLOGICAL TESTS – TECHNOLOGISCHE PRÜFUNGEN
ТЕХНОЛОГИЯ ИССЛЕДОВАНИЯ

Ring tensile test - positive results

Each pipe has been hydrostatically tested by pressure 70 Bar - positive results. Time 10 s.

Powierzchnię i wymiary zbadano w 100% - Surface et dimensions ont été contrôlés et 100% - Surface and dimensions tested at 100%
Oberfläche und Abmessungen geprüft zu 100% - Наружный осмотр и проверка измерений произведены в 100% - **positive results**

4. BADANIA NIENISZCZĄCE - Essais Non Destuctifs – Non Destructive Tests – Zerstörungsfreie Prüfungen - Неразрушающий Контроль (D02-D50)

Numery rur - Le nombre de tubes - Numbers of tubes - Nummern von Röhren - Номера трубок

5. UWAGI DODATKOWE – Additional Remarks – Autresobservations – Andere Bemerungen- Дополнительные примечания
(Z05-Z99)
Approved acc. to AD2000-Merkblatt W0 by TÜV NORD Systems GmbH & Co. KG. Certified acc. to Pressure Equipment Directive 2014/68/EU annex I, sec 4.3 by the Certification body for pressure equipment of the TÜV NORD Systems GmbH & Co. KG, reg.-no. 0045, Certificate No 07/203/9120/WP/0888/22 and Certificate No 07/202/9120/WZ/0888/22 and ISO 9001/TUV Certificate No 04-100 950250-001. The Company has a Quality System for the manufacturer's materials in acc. to Pressure Equipment (Safety) Regulations 2016 Cert. No. HPiUK-P1139-023-Q-03-00 is available on www.alchemiasa.pl

(Z01)**Niniejszym potwierdzam, że wyżej wymieniony material został zbadany i spełnia warunki potwierdzenia zamówienia** - Par la presente je confirme que le materiel susmentionne a ete examine et il remplit les conditions de la confirmation de commande - We hereby certify, that the material described above has been tested and complies with the terms of the order - Es wird bestaetigt, dass das oben genannte Material geprueft wurde und den Bedingungen der Bestellung entspricht - Подтверждаем, что вышеуказанный материал был протестирован и соответствует условиям подтверждения договора

(D01)Cechowanie – Marquage – Marking –Kennzeichnung – Обозначен
Manufacturer's Mark/ EN 10216-3/ P355N/TC1/EN 10210/ S355J2H/S355NH/ EN 10297-1/ E355K2/ Heat No/ Technical Inspector's Mark

(D51-D99)**Na podstawie wyżej przeprowadzonych prób material zwolniono** – Sur la base des essais ci-dessus le material est dliv-According to the carried out tests the material released – Untersuchungen wurde das Material freigegeben – На основании вышеизложенных Испытаний признан годным.

Kontrola Jakości Contrôle de Fabrication Control of Manufactur Fabrikationskontrolle Технический контроль (Z03)	Dyrekcja Direction Management Direktion Дирекция (Z05)	(Z02)
Z-ca Kierownika Działu Kontroli Jakości i Nadzoru Technologicznego Artur Kupiec	Kierownik Działu Kontroli Jakości i Nadzoru Technologicznego Barbara Czyż	dn. 26.09. 2024 r. 2827/2024/AH Strona Page Page Seite Страница 2/2

KJ 21/634

BUREAU VERITAS ITALY
WITNESSED NOTED REVIEWED
SURVEYOR F. BOTTI
DATE 26 NOV. 2024

Approved by CFERMI on 23/10/24

Approved by QUALITY2 on 24/10/24

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TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
LABORATORIO PROVE MATERIALI
Via dell'Artigianato, 13 – 29010 Gragnano Tr.se
Tel. (0523) 1864011 - Fax (0523) 592744
e-mail: lpm@lpmsnc.it
http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07573 | **Data** Date NOVEMBER, 26/2024 | **Pagina** Page 1 **di** of 4

La riproduzione parziale di questo rapporto è vietata senza autorizzazione scritta da parte di L.P.M. s.n.c.
Tutti i risultati presenti in questo rapporto si riferiscono solamente ai campioni sottoposti a prova.
Se non diversamente specificato il campionamento è stato effettato dal Cliente.

Se non diversamente specificato dal contratto o dall'offerta, i campioni e gli avanzi verranno conservati da L.P.M. s.n.c. per 15 giorni solari; dopo tale periodo verranno rottamati.
In caso di prove presenziate da ispettori di terza parte i campioni e gli avanzi verranno rottamati direttamente all'emissione del rapporto di prova.

Partial reproduction of this report is forbidden without written authorization by L.P.M. s.n.c.
All the results described in this report refer only to the tested samples.
Unless otherwise specified sampling has been performed by the Customer.

Unless otherwise specified on the offer or contract, samples and leftover material will be stored by L.P.M. s.n.c. for 15 calendar days; after this time the will be discarded.
In case of tests witnessed by third part inspectors samples and leftover material will be discarded directly after the emission of the test report.

Cliente Customer: T.A.L. TUBI ACCIAIO LOMBARDA S.p.A. - Via G. di Vittorio, 6 - 29017 FIORENZUOLA D'ARDA (PC)
JOB: 324002520-324002471-324002472
L.P.M. ORDER: 24-002646

Riferimento del cliente Customer's reference: ROSETTI MARINO P.O. 1724002081 122A70C

Norma di collaudo Technical specification: UNI EN 10210-1:2016 // UNI EN 10216-3:2014 // UNI EN 10297-1:2003

Data ingresso materiale Date of material income: 12/11/2024 D.D.T. No. 202406408

Oggetto delle prove – Object of testing

No. Campione Sample No.	ID Cliente Customer ID	Descrizione – Description
24CA08413	520/1	TEST COUPON FROM PIPE O.D. 508 THK. 40 mm

Descrizione della fornitura dichiarata dal cliente – Extent of the material delivery declared by customer

Pos. Item	Pos. Cliente Cust. Item	Q.tà Q.ty	Tipo del prodotto – Type of the product	Materiale Material	ID Cliente Customer ID	No. Campione Sample No.	No. di colata Heat No.
1	-	1	PIPE O.D. 508 THK. 40 mm	UNI EN 10210-1:2006 S355J2H UNI EN 10216-3:2014 P355N UNI EN 10297-1:2003 E355	520/1	24CA08413	900120

Doc. Fornito dal cliente Customer's document: SAMPLING SHEET No. 24/122

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED - NOTED - REVIEWED SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
Di Molinari Vincenzo e C.
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http://www.lpmsnc.it

ACCREDIA L'ENTE ITALIANO DI ACCREDITAMENTO
LAB N° 1598 L

RAPPORTO DI PROVA
TEST REPORT

24RP07573 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 2 di / of 4

Risultati prova di trazione – Tensile test results

Norma di prova – Test standard: **UNI EN ISO 6892-1:2020** | Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		ALLUNGAMENTO ELONGATION El%	
								ReH Richiesto Required	ReH Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%
520/1	24CA08413	24PR46473	Ø 9.97	78.07	50	TB	+ 24	≥ 345	371	≥ 490 ≤ 630	524	≥ 20	33.6

Legenda – Legend: E: EXTRADOS; I: INTRADOS; M: MID THICKNESS; L: LONGITUDINAL; T: TRANSVERSAL.

Note – Notes: REQUIRED VALUES ACC. TO UNI EN 10216-3:2014.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED~~ ~~REVIEWED~~ SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP07573 | Data Date NOVEMBER, 26/2024 | Pagina Page 3 di of 4

Risultati prova di trazione attraverso lo spessore – Tensile test through the thickness results

Metodo di prova – Test method: **UNI EN 10164:2018** | Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTOMER ID	CAMPIONE SAMPLE	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	SEZIONE SECTION	LUNGHEZZA LENGHT Lc	DIREZIONE DIRECTION	TEMP.	SNERVAMENTO YIELD STRENGTH YS		ROTTURA TENSILE STRENGTH TS		STRIZIONE REDUCTION OF AREA Z		
								Rp 0.2% Richiesto Required	Rp 0.2% Ottenuto Result	Richiesto Required	Ottenuto Result	Richiesto Required AVE./MIN.	Ottenuto Result	Media Average
N0.	N0.	N0.	mm	mm²	mm		°C	MPa	MPa	MPa	MPa	%	%	%
520/1	24CA08413	24PR46526	Ø 5.94	27.71	12	Z	+ 25	INFO	338	INFO	536	-	69	
520/1	24CA08413	24PR46527	Ø 5.99	28.18	12	Z	+ 25	INFO	336	INFO	529	-	68	69
520/1	24CA08413	24PR46528	Ø 5.97	27.99	12	Z	+ 25	INFO	333	INFO	529	-	69	

Note:
Note:

Legenda:
Legend:
B: BASE MATERIAL; H: HEAT AFFECTED ZONE; W: WELD METAL; F : FUSION LINE; F2 : FUSION LINE + 2mm;
F5: FUSION LINE +5 mm .
O: NEAR OUTER SURFACE; I: NEAR INNER SURFACE; M: MID THICKNESS; S4: SAMPLET AT 1/4 OF THE THK.
L: LONGITUDINAL; T: TRANSVERSAL; Z: THROUGH THE THICKNESS.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED NOTED REVIEWED SURVEYOR DATE 26 NOV. 2024	E.FERRI	Dott. Ing. VINCENZO MOLINARI ALDO Degli INGEGNERI Prov. PIACENZA N. 824 Prov. PIACENZA

L.P.M. s.n.c.
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RAPPORTO DI PROVA
TEST REPORT

24RP07573 | Data / Date: NOVEMBER, 26/2024 | Pagina / Page: 4 di / of 4

Risultati prova di resilienza – Impact test results

Norma di prova – Test standard: **UNI EN ISO 148-1:2016 KV2** | Data delle prove – Date of testing: **NOVEMBER, 26/2024**

ID CLIENTE CUSTUMER ID	NO. CAMPIONE SAMPLE NO.	PROVINO SPECIMEN	DIMENSIONI DIMENSIONS	POSIZIONE E DIREZIONE LOCATION AND DIRECTION	TEMP.	ENERGIA ASSORBITA ABSORBED ENERGY					AREA TENACE SHEAR AREA			ESPANSIONE LATERALE LATERAL EXPANSION	
						Richiesto Required Media/ Min Average/ Mi	Ottenuto Result(J)			Media Average	Richiesto Required	Ottenuto Result	Media Average	Richiesto Required	Ottenuto Result
N0.	N0.	N0.	mm		°C	J	A	B	C	J	%	%	%	mm	mm
520/1	24CA08413	24PR46474	10x10x55	LB	-20	≥ 40	136	154	146	145				-	

Note – Notes: TEST TEMPERATURE AND VALUES ACC. TO UNI EN 10216-3:2014.

FINE RAPPORTO DI PROVA - END OF TEST REPORT.

Legenda – Legend: B: Base material; H.A.Z.: Heat Affected Zone; W: Weld metal; L: Longitudinal; T: Transversal; FL: Fusion Line; Th: Thickness.

Cliente – Customer	**Ispettore** – Inspector	**Resp. Lab.** – Lab. Manager	**Approvato da** – Approved by
	BUREAU VERITAS ITALY WITNESSED ~~NOTED REVIEWED~~ SURVEYOR DATE 26 NOV. 2024	E. FERRI	Dott. Ing. VINCENZO MOLINARI ALBO degli INGEGNERI Prov. PIACENZA N. 824 - Prov. PIACENZA -

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Europe Steel Projects B.V.	1724002330	122A70C	Q012401011

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **21.11.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EUROPE
STEEL
CENTER

Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132692
Our reference: L. Barelds
Your Po nr: 1724002330

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no	Plate no	MTC	HS Code	C.o.O.
1	Plates		10000	3050	60	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	10000	30,5	10	1.436,55	14.365,5	765033	284349-1	74432	72085120	Voest
2	Plates		12000	3050	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	36,6	12	837,99	10.055,9	746144	378171-1	68195	72085120	Voest
2	Plates		4000	2500	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	4000	10	4	686,88	2.747,5	840319	282704-1	64886	72085120	Voest
2	Plates		4000	2500	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	4000	10	4	686,88	2.747,5	840319	282703-1	64886	72085120	Voest
								4					29.916,35					

EUROPE
STEEL
CENTER

Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132692
Our reference: L. Barelds
Your Po nr: 1724002330

rev 0 - 2024

ITEM	MATERIAL	Dimension	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heat no	Plate no	MTC	HS Code	C.o.O.
1	Plates		10000	3050	60	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	10000	30,5	10	1.436,55	14.365,5	765033	284349-1	74432	72085120	Voest
2	Plates		12000	3050	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	12000	36,6	12	837,99	10.055,9	746144	378171-1	68195	72085120	Voest
2	Plates		4000	2500	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	4000	10	4	686,88	2.747,5	840319	282704-1	64886	72085120	Voest
2	Plates		4000	2500	35	S460MLO Z35 acc EN10225	3.2 acc EN 10204	1	4000	10	4	686,88	2.747,5	840319	282703-1	64886	72085120	Voest
								4					29.916,35					

74432

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

N142X7NR-4

Z02 Date 21-08-2024

A04 manufacturer's work symbol
voestalpine

A03 Document number	A0380125/C	A08 Order-No.:	4500825	A07 OrderDat.	27-05-2024

Date of dispatch 20-08-2024 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6959

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO NORSOK MDS Y40

B03 Standard EN 10225-1 : 2019

Supplementary requirements TOUGHCORE

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
MATERIAL ACC. NORSOK M-120:2021 REV. 6 // OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
MATERIAL IS PRE-QUALIFIED ACC. TO ANNEX E OF EN10225

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
765033	284348/1	20	60,00	3050,0	12000	1		17.483	48620	S460MLOVAS
765033	284349/1	20	60,00	3050,0	12000	1		17.569	48620	S460MLOVAS
961327	284561/1	10	60,00	2051,0	12000	1		11.878	48620	S460MLOVAS
961327	284562/1	10	60,00	2051,0	12000	1		11.857	48620	S460MLOVAS
		Sum				4		58.787		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted

Augsburg, 2024-08-30

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

NV

for DNV
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Zambrano Colmenares, Antonio Ramon
Surveyor

voestalpine
ONE STEP AHEAD.

Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=		.150				.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.0100	.43
765033	.063	.185	1.510	.006	.0011	.034	.180	.520	.115	.013	.003	.026	.012	.0049	.0002	.0020	.0002	.0020	.0020	.0020	.41
961327	.065	.189	1.510	.007	.0005	.031	.172	.520	.116	.016	.005	.027	.012	.0050	.0002	.0020	.0002	.0020	.0020	.0020	.41

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	LF03 %
>=				
Set values <=	.22	.090	.110	.900
765033	.17	.029	.041	.828
961327	.17	.032	.044	.824

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

NV

Augsburg, 2024-08-30
for DNV
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Zambrano Colmenares, Antonio Ramon
Surveyor

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						460	550		17.0			
Set values	<=						580	700			90.00		
765033	284349	Ø	9.97	F	V	T	485	562	A5	30.5	86.42		
	284349	Ø	9.99	F	V	T	463	558	A5	30.0	83.07	001	1
961327	284562	Ø	9.98	F	V	T	482	568	A5	30.0	84.79		
	284562	Ø	9.98	F	V	T	460	552	A5	29.9	83.34	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

Augsburg, 2024-08-30

Z02
Inspection representative voestalpine
Gabriel Marco

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for DNV
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Zambrano Colmenares, Antonio Ramon
Surveyor

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values	>=					-40	42	42	42	60			
765033	284349	CV 10x10	F	O	T	-40	362	363	360	362			
	284349	CV 10x10	F	O	T	-40	322	324	321	322	001	1	
	284349	CV 10x10	F	K	T	-40	354	357	347	353			
	284349	CV 10x10	F	K	T	-40	344	346	340	343	001	1	
961327	284562	CV 10x10	F	O	T	-40	365	387	365	372			
	284562	CV 10x10	F	O	T	-40	319	313	318	317	001	1	
	284562	CV 10x10	F	K	T	-40	344	326	357	342			
	284562	CV 10x10	F	K	T	-40	305	309	312	309	001	1	
Set values	>=					-40	29	29	29	46			
765033	250934	CV 10x10	F	ZB2	T	-40	325	319	311	319			strain aged 5%, 60 min. at 250°C
961327	284562	CV 10x10	F	ZB2	T	-40	323	321	337	327			strain aged 5%, 60 min. at 250°C

C40;shape:

Augsburg, 2024-08-30

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.

CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
765033	250934	F	OS	HV10	226	229	221
961327	284562	F	OS	HV10	210	212	216

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						440	440	440	25	25	25	35
Set values <=												
765033	250934	Ø	9.94	F	S	550	554	557	75	78	76	76
961327	284562	Ø	9.99	F	S	566	566	563	77	77	77	77

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0070	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
765033	284349	.064	.184	1.530	.006	.0009	.033	.181	.510	.113	.013	.003	.026	.012	.0044	.0002	.0020	.0002	.0020	.0020
961327	284562	.067	.187	1.550	.006	.0004	.032	.174	.520	.119	.014	.005	.027	.013	.0053	.0002	.0020	.0002	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
Set values >= / <=		.0100	.43	.22	.090	.110	.900
765033	284349	.0020	.41	.17	.029	.041	.817
961327	284562	.0020	.42	.18	.032	.045	.827

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V
LF03: Cr+Ni+Cu+Mo

Remarks

Simulated heat treatment of test coupons:

Item 10:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 142 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 20:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 142 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer. Melted and rolled in Austria

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Augsburg, 2024-08-30

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

N1423VKC-4

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	**A0370161/A**	**A08 Order-No.:**	**1500331**	**A07 OrderDat.**	25-02-2021

Date of dispatch 14-06-2021 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6704

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
Options 1, 6, 7, 9, 11, 12, 17 of EN 10225:2019 and Option 18 of EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
735829	285775/1	20	15,00	2500,0	12000	1		3.571	53654	S460MLOVAS
735829	285775/2	20	15,00	2500,0	12000	1		3.570	53654	S460MLOVAS
735829	285777/1	20	15,00	2500,0	12000	1		3.597	53654	S460MLOVAS
735829	285777/2	20	15,00	2500,0	12000	1		3.597	53654	S460MLOVAS
735829	285779/1	20	15,00	2500,0	12000	1		3.595	53654	S460MLOVAS
735829	285779/2	20	15,00	2500,0	12000	1		3.595	53654	S460MLOVAS
735829	285781/1	20	15,00	2500,0	12000	1		3.619	53654	S460MLOVAS
735829	285781/2	20	15,00	2500,0	12000	1		3.619	53654	S460MLOVAS
735829	285783/2	20	15,00	2500,0	12000	1		3.594	53654	S460MLOVAS
735829	285783/1	20	15,00	2500,0	12000	1		3.593	53654	S460MLOVAS
839780	279894/1	190	80,00	2000,0	16000	1		20.508	53657	S460MLOVAS
839885	279974/1	150	45,00	2500,0	12000	1		10.761	53657	S460MLOVAS

A04
Symbol of the manufacturer's work

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SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT
DNV 1864
~~Witnessed~~ X Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.

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Inspection representative voestalpine Grobblech
LINTNER Norbert

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
839885	279975/1	150	45,00	2500,0	12000	1		10.748	53657	S460MLOVAS
839886	281434/1	160	50,00	2051,0	12000	1		9.850	53657	S460MLOVAS
840319	282095/1	90	30,00	2500,0	15750	1		9.423	53657	S460MLOVAS
840319	282097/1	90	30,00	2500,0	16000	1		9.622	53657	S460MLOVAS
840319	282099/1	90	30,00	2500,0	16000	1		9.589	53657	S460MLOVAS
840319	282103/1	140	40,00	2500,0	12000	1		9.583	53657	S460MLOVAS
840319	282105/1	140	40,00	2500,0	12000	1		9.583	53657	S460MLOVAS
840319	282107/1	140	40,00	2500,0	12000	1		9.496	53657	S460MLOVAS
840319	282108/1	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282108/2	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282109/1	140	40,00	2500,0	12000	1		9.590	53657	S460MLOVAS
840319	282110/2	30	20,00	2500,0	12000	1		4.829	53656	S460MLOVAS
840319	282110/1	30	20,00	2500,0	12000	1		4.828	53656	S460MLOVAS
840319	282111/1	140	40,00	2500,0	12000	1		9.589	53657	S460MLOVAS
840319	282112/1	30	20,00	2500,0	12000	1		4.801	53654	S460MLOVAS
840319	282112/2	30	20,00	2500,0	12000	1		4.801	53654	S460MLOVAS
840319	282113/1	140	40,00	2500,0	12000	1		9.555	53657	S460MLOVAS
840319	282703/1	110	35,00	2500,0	16000	1		11.167	53657	S460MLOVAS
840319	282704/1	110	35,00	2500,0	16000	1		11.131	53657	S460MLOVAS
840319	282705/1	110	35,00	2500,0	16000	1		11.185	53657	S460MLOVAS
840320	282101/1	50	22,00	2500,0	12000	1		5.252	53657	S460MLOVAS
840320	282101/2	50	22,00	2500,0	12000	1		5.253	53657	S460MLOVAS
840320	282114/2	30	20,00	2500,0	12000	1		4.828	53657	S460MLOVAS
840320	282114/1	30	20,00	2500,0	12000	1		4.828	53655	S460MLOVAS
840320	282115/2	60	25,00	2051,0	12000	1		4.912	53657	S460MLOVAS
840320	282115/1	60	25,00	2051,0	12000	1		4.913	53657	S460MLOVAS
840320	282116/21	30	20,00	2500,0	12000	1		4.804	53657	S460MLOVAS
840320	282116/11	30	20,00	2500,0	12000	1		4.805	53655	S460MLOVAS
840320	282117/2	60	25,00	2051,0	12000	1		4.911	53657	S460MLOVAS
840320	282117/1	60	25,00	2051,0	12000	1		4.911	53657	S460MLOVAS
840983	285758/1	80	30,00	2500,0	12000	1		7.171	53657	S460MLOVAS
840983	285759/1	80	30,00	2500,0	12000	1		7.141	53657	S460MLOVAS
840983	285760/1	80	30,00	2500,0	12000	1		7.138	53657	S460MLOVAS
840983	285761/1	80	30,00	2500,0	12000	1		7.147	53657	S460MLOVAS

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EN 10225-1 : 2019
Date: 2021-06-24
Sign: Antonio R. Zambrano C.

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Inspection representative voestalpine Grobblech
LINTNER Norbert

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
840983	285762/1	80	30,00	2500,0	12000	1		7.147	53657	S460MLOVAS
926774	281728/1	120	35,00	3000,0	12000	1		10.046	53657	S460MLOVAS
926774	284937/1	170	50,00	3000,0	16000	1		19.199	53657	S460MLOVAS
928521	282096/1	130	40,00	2051,0	12000	1		7.870	53657	S460MLOVAS
928521	282102/1	100	35,00	2500,0	12000	1		8.404	53657	S460MLOVAS
928521	282104/1	100	35,00	2500,0	12000	1		8.403	53657	S460MLOVAS
928521	282106/1	120	35,00	3000,0	12000	1		10.068	53657	S460MLOVAS
928521	285656/1	180	60,00	2051,0	12000	1		11.808	53657	S460MLOVAS
		Sum				54		397.204		

B14 - Supplementary information

length-deviation for plate(s) 282095/1: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
>=						.015																
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.010	.41	.23
735829	.036	.341	1.610	.008	.0007	.041	.174	.170	.006	.160	.003	.038	.012	.0048	.0002	.0020	.0020	.0030	.0020	.002	.36	.15
>=						.015																
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.010	.41	.22
839780	.065	.391	1.550	.007	.0007	.037	.179	.270	.012	.167	.005	.027	.013	.0052	.0002	.0020	.0015	.0020	.0020	.002	.39	.18
839885	.030	.314	1.580	.006	.0004	.031	.176	.160	.003	.164	.005	.040	.011	.0050	.0002	.0020	.0015	.0020	.0020	.002	.35	.14
839886	.028	.316	1.580	.007	.0005	.036	.165	.160	.004	.164	.004	.037	.012	.0044	.0002	.0020	.0016	.0020	.0020	.002	.35	.14
840319	.028	.344	1.620	.005	.0005	.028	.174	.170	.004	.163	.005	.038	.011	.0057	.0002	.0020	.0017	.0020	.0020	.002	.36	.14
840320	.032	.339	1.650	.008	.0005	.044	.186	.180	.006	.156	.005	.040	.013	.0045	.0002	.0020	.0021	.0020	.0030	.002	.37	.15
840983	.033	.343	1.620	.007	.0012	.031	.170	.170	.004	.167	.004	.035	.012	.0053	.0002	.0020	.0016	.0020	.0020	.002	.36	.15
926774	.032	.342	1.620	.009	.0008	.038	.183	.180	.005	.162	.003	.036	.013	.0044	.0003	.0020	.0016	.0020	.0020	.002	.36	.15
928521	.030	.337	1.630	.007	.0004	.035	.173	.170	.007	.157	.005	.039	.012	.0034	.0002	.0020	.0016	.0020	.0020	.002	.36	.14

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LINTNER Norbert

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	Al/N
>=			2.00
Set values <=	.120	.130	
735829	.041	.053	8.54
>=			2.00
Set values <=	.120	.130	
839780	.032	.045	7.12
839885	.045	.056	6.20
839886	.041	.053	8.18
840319	.043	.054	4.91
840320	.045	.058	9.78
840983	.039	.051	5.85
926774	.039	.052	8.64
928521	.044	.056	10.29

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Al/N: Al/N
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						460	520		17.0			
Set values	<=							700			93.00		
735829	285775	30,0	15.26	F	O	T	552	599	A5	21.6	92.10		
	285777	30,0	15.45	F	O	T	531	646	A5	23.5	82.19		
	285789	30,0	15.61	F	O	T	560	611	A5	20.0	91.55		
	>=						440	520		17.0			
Set values	<=							700			93.00		
840319	282112	30,0	20.14	F	O	T	532	589	A5	22.0	90.37		
840320	282115	30,0	25.22	F	O	T	539	598	A5	24.1	90.13		
	282116	30,0	20.32	F	O	T	534	592	A5	19.0	90.12		
	>=						420	520		17.0			
Set values	<=							700			93.00		
840319	282099	30,0	30.78	F	O	T	526	593	A5	24.5	88.72		
	282103	30,0	41.09	F	O	T	485	593	A5	23.9	81.83		
	282111	30,0	40.81	F	O	T	488	595	A5	23.3	82.10		
	282113	30,0	40.44	F	O	T	481	594	A5	24.7	81.02		
	282705	30,0	36.16	F	O	T	486	600	A5	24.6	81.10		
840983	285754	30,0	30.64	F	O	T	533	603	A5	22.1	88.48		
	286029	30,0	30.37	F	O	T	526	590	A5	24.7	89.08		
926774	281728	30,0	35.72	F	O	T	478	597	A5	25.6	79.97		
928521	282096	30,0	41.11	F	O	T	464	586	A5	25.1	79.18		
	282104	30,0	35.90	F	O	T	487	590	A5	24.1	82.59		
	>=						415	500		17.0			
Set values	<=							675			93.00		
839885	279975	Ø	10.01	F	V	T	453	569	A5	27.8	79.68		
	279975	Ø	10.01	F	V	T	491	571	A5	28.0	86.05	001	1
839886	278846	Ø	9.99	F	V	T	492	580	A5	27.6	84.82		
	281434	Ø	10.01	F	V	T	517	587	A5	28.7	87.97	001	1
926774	284937	Ø	10.00	F	V	T	477	583	A5	26.7	81.84		
	284937	Ø	10.00	F	V	T	509	585	A5	28.6	87.03	001	1
928521	282872	Ø	10.01	F	V	T	478	563	A5	27.2	84.96		
	282872	Ø	10.03	F	V	T	462	539	A5	30.0	85.74	001	1
	>=						405	500		17.0			

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							405	500		17.0			
Set values <=								675			93.00		
839780	279894	Ø	10.00	F	V	T	431	576	A5	23.8	74.78		
	279894	Ø	10.01	F	V	T	481	577	A5	27.0	83.37	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	29	29	29	46			
735829	285777	CV 10x10	F	ZB2	T	-40	343	339	345	342			strain aged 5%, 60 min. at 250°C
839780	278095	CV 10x10	F	ZB2	T	-40	227	254	216	233			strain aged 5%, 60 min. at 250°C
839885	278843	CV 10x10	F	ZB2	T	-40	351	348	359	353			strain aged 5%, 60 min. at 250°C
839886	278846	CV 10x10	F	ZB2	T	-40	356	347	349	350			strain aged 5%, 60 min. at 250°C
840319	282112	CV 10x10	F	ZB2	T	-40	338	342	342	341			strain aged 5%, 60 min. at 250°C
840320	282115	CV 10x10	F	ZB2	T	-40	360	345	365	356			strain aged 5%, 60 min. at 250°C
840983	285754	CV 10x10	F	ZB2	T	-40	287	290	288	288			strain aged 5%, 60 min. at 250°C
926774	281728	CV 10x10	F	ZB2	T	-40	362	327	336	342			strain aged 5%, 60 min. at 250°C
	284937	CV 10x10	F	ZB2	T	-40	353	338	356	349			strain aged 5%, 60 min. at 250°C
928521	281154	CV 10x10	F	ZB2	T	-40	354	368	359	360			strain aged 5%, 60 min. at 250°C
	282104	CV 10x10	F	ZB2	T	-40	374	359	348	360			strain aged 5%, 60 min. at 250°C
Set values <=						-40	42	42	42	60			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
735829	285775	CV 10x10	F	O	T	-40	343	353	358	351			
	285777	CV 10x10	F	O	T	-40	314	334	339	329			
	285789	CV 10x10	F	O	T	-40	380	374	379	378			
839780	279894	CV 10x10	F	O	T	-40	148	272	274	231			
	279894	CV 10x10	F	O	T	-40	201	214	243	219	001	1	
	279894	CV 10x10	F	K	T	-40	210	225	116	184			
	279894	CV 10x10	F	K	T	-40	73	117	52	80	001	1	
839885	279975	CV 10x10	F	O	T	-40	345	351	347	347			
	279975	CV 10x10	F	O	T	-40	344	317	309	323	001	1	
	279975	CV 10x10	F	K	T	-40	380	376	378	378			
	279975	CV 10x10	F	K	T	-40	54	321	303	226	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
839886	278118	CV 10x10	F	O	T	-40	344	344	345	344			
	281434	CV 10x10	F	O	T	-40	291	315	319	308	001	1	
	278846	CV 10x10	F	K	T	-40	375	368	363	369			
	281434	CV 10x10	F	K	T	-40	332	318	304	318	001	1	
840319	282099	CV 10x10	F	O	T	-40	359	357	368	361			
	282103	CV 10x10	F	O	T	-40	406	376	399	393			
	282112	CV 10x10	F	O	T	-40	376	369	345	363			
	282113	CV 10x10	F	O	T	-40	362	365	379	369			
	282705	CV 10x10	F	O	T	-40	340	355	358	351			
840320	282115	CV 10x10	F	O	T	-40	359	358	353	357			
	282116	CV 10x10	F	O	T	-40	363	349	362	358			
840983	285754	CV 10x10	F	O	T	-40	341	315	329	328			
	286029	CV 10x10	F	O	T	-40	328	326	360	338			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
926774	281728	CV 10x10	F	O	T	-40	372	351	370	364			
	284937	CV 10x10	F	O	T	-40	365	345	347	353			
	284937	CV 10x10	F	O	T	-40	287	291	280	286	001	1	
	284937	CV 10x10	F	K	T	-40	329	375	364	356			
	284937	CV 10x10	F	K	T	-40	305	265	303	291	001	1	
928521	282096	CV 10x10	F	O	T	-40	371	389	374	378			
	282104	CV 10x10	F	O	T	-40	381	396	401	393			
	282872	CV 10x10	F	O	T	-40	352	352	352	352			
	282872	CV 10x10	F	O	T	-40	335	345	336	339	001	1	
	282872	CV 10x10	F	K	T	-40	374	361	387	374			
	282872	CV 10x10	F	K	T	-40	318	341	330	330	001	1	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
735829	285777	F	OS	HV10	230	226	224
839780	279894	F	OS	HV10	245	243	239
839885	279975	F	OS	HV10	210	215	209
839886	281434	F	OS	HV10	235	220	223
840319	282112	F	OS	HV10	207	204	203
840320	282115	F	OS	HV10	197	202	205
840983	285754	F	OS	HV10	198	193	190
926774	281728	F	OS	HV10	211	216	209
928521	282104	F	OS	HV10	216	209	226

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						416	416	416	25	25	25	35
735829	285777	Ø	6.03	F	S	616	615	617	81	80	83	81
840319	282112	Ø	6.05	F	S	599	598	599	80	83	82	82
	282113	Ø	9.98	F	S	574	574	574	83	82	83	83
840320	282115	Ø	9.98	F	S	587	587	587	82	82	83	82
	282116	Ø	6.04	F	S	615	611	608	82	81	83	82
840983	285754	Ø	9.98	F	S	587	590	589	79	77	79	78
926774	281728	Ø	9.97	F	S	580	582	581	82	82	80	81
928521	282104	Ø	9.98	F	S	567	571	570	83	78	81	81
Set values >=						400	400	400	25	25	25	35
839780	278095	Ø	10.01	F	S	566	567	567	80	80	80	80
839885	278148	Ø	9.97	F	S	559	555	558	79	83	82	81
839886	278118	Ø	9.99	F	S	543	543	544	62	64	61	62
926774	267726	Ø	9.95	F	S	550	549	551	84	85	83	84
928521	282872	Ø	10.00	F	S	540	538	537	83	85	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
735829	285777	.036	.335	1.590	.007	.0008	.037	.172	.170	.006	.160	.003	.037	.012	.0043	.0002	.0020	.0020	.0020	.0030
	286058	.036	.336	1.590	.008	.0005	.040	.173	.170	.005	.159	.003	.038	.012	.0032	.0002	.0020	.0019	.0020	.0020
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
839780	279894	.061	.389	1.560	.008	.0007	.040	.177	.270	.015	.161	.005	.028	.013	.0040	.0002	.0020	.0019	.0020	.0020
839885	279975	.031	.310	1.590	.007	.0007	.034	.169	.170	.004	.160	.004	.039	.010	.0042	.0002	.0020	.0019	.0020	.0020
839886	281434	.029	.319	1.610	.007	.0007	.039	.163	.170	.006	.165	.003	.035	.012	.0037	.0002	.0020	.0017	.0020	.0020
840319	282103	.030	.333	1.640	.007	.0007	.032	.178	.180	.006	.160	.004	.040	.011	.0042	.0002	.0020	.0019	.0020	.0020
	282110	.029	.335	1.650	.007	.0007	.032	.179	.180	.006	.161	.004	.040	.011	.0039	.0002	.0020	.0017	.0020	.0020
	282112	.030	.332	1.620	.006	.0006	.032	.179	.180	.006	.159	.004	.039	.011	.0040	.0002	.0020	.0019	.0020	.0020
	282704	.031	.334	1.640	.007	.0007	.031	.180	.180	.006	.161	.004	.040	.011	.0044	.0002	.0020	.0017	.0020	.0020
840320	282114	.031	.332	1.620	.007	.0006	.036	.183	.180	.006	.156	.004	.039	.012	.0040	.0002	.0020	.0018	.0020	.0020
	282115	.032	.335	1.640	.008	.0007	.043	.180	.180	.006	.154	.004	.039	.013	.0043	.0002	.0020	.0017	.0020	.0020
840983	285754	.034	.341	1.620	.008	.0013	.033	.175	.180	.006	.165	.004	.039	.012	.0049	.0002	.0020	.0017	.0030	.0020
	286018	.033	.343	1.610	.007	.0010	.035	.173	.170	.006	.162	.004	.038	.012	.0042	.0002	.0020	.0018	.0020	.0020
926774	281728	.032	.336	1.610	.008	.0010	.037	.182	.170	.004	.154	.003	.037	.012	.0044	.0002	.0020	.0018	.0020	.0020
928521	282104	.029	.333	1.610	.008	.0007	.033	.166	.170	.006	.157	.005	.039	.012	.0036	.0002	.0020	.0015	.0030	.0020
	285259	.030	.332	1.600	.007	.0004	.035	.173	.170	.007	.157	.005	.038	.012	.0032	.0002	.0020	.0015	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.010	.0100	.41	.23	.120	.130	
735829	285777	.002	.0020	.36	.15	.040	.052	8.60
	286058	.002	.0020	.36	.15	.041	.053	12.50
	>=							2.00
Set values	<=	.010	.0100	.41	.22	.120	.130	
839780	279894	.002	.0020	.39	.18	.033	.046	10.00
839885	279975	.002	.0020	.35	.14	.043	.053	8.10
839886	281434	.002	.0020	.35	.14	.038	.050	10.54
840319	282103	.002	.0020	.36	.14	.044	.055	7.62
	282110	.002	.0020	.36	.14	.044	.055	8.21
	282112	.002	.0020	.36	.14	.043	.054	8.00
	282704	.002	.0020	.37	.15	.044	.055	7.05
840320	282114	.002	.0020	.36	.14	.043	.055	9.00
	282115	.002	.0020	.37	.15	.043	.056	10.00
840983	285754	.002	.0020	.36	.15	.043	.055	6.73
	286018	.002	.0020	.36	.15	.042	.054	8.33
926774	281728	.002	.0020	.36	.14	.040	.052	8.41
928521	282104	.002	.0020	.35	.14	.044	.056	9.17
	285259	.002	.0020	.36	.14	.043	.055	10.94

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF02: Nb+V+Ti
Al/N: Al/N
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 150-190:

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Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 20, 30, 50, 60, 80, 90, 100, 110, 120, 130, 140, 150
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 160, 170, 180, 190
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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LINTNER Norbert

voestalpine
ONE STEP AHEAD.

voestalpine Grobblech GmbH

A02
Inspection certificate

EN 10204 - 3.2

N1423VNK-8

Z02 Date 31-05-2022

voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A03 Document number	A0373118/A	A08 Order-No.:	2531131	A07 OrderDat.	14-02-2022	Date of dispatch	30-05-2022 400F

A06 Customer	Kroeger Staal B.V. Oostelljke Randweg 40 NL-4782 PZ MOERDIJK	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	6792	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Europe Steel Projects BV Oostelijke Randweg 40 NL-4782 PZ MOERDIJK	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

B03 - Supplementary requirements

FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
741417	381394/1	80	30,00	2051,0	12000	1		5.869	68859	S460MLOVAS
744016	381027/1	190	60,00	3050,0	12000	1		17.598	68859	S460MLOVAS
745815	379458/1	230	75,00	2500,0	12000	1		18.042	68859	S460MLOVAS
745815	379459/1	210	70,00	3000,0	12000	1		20.193	68859	S460MLOVAS
745815	380913/1	240	75,00	3050,0	12000	1		21.990	68859	S460MLOVAS
745815	381028/1	190	60,00	3050,0	12000	1		17.563	68859	S460MLOVAS
745817	375380/1	220	75,00	2051,0	12000	1		14.805	68859	S460MLOVAS
745817	379460/1	200	70,00	2051,0	16000	1		18.410	68859	S460MLOVAS
745817	379461/1	200	70,00	2051,0	16000	1		18.428	68859	S460MLOVAS
745817	379956/1	170	60,00	2051,0	12000	1		11.857	68859	S460MLOVAS
746144	376736/1	50	15,00	3050,0	12000	1		4.443	68859	S460MLOVAS
746144	376736/2	50	15,00	3050,0	12000	1		4.443	68859	S460MLOVAS

A04
Symbol of the manufacturer's work

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	reference no.
746144	376737/1	50	15,00	3050,0	12000	1		4.441	68859	S460MLOVAS
746144	376738/2	50	15,00	3050,0	12000	1		4.443	68859	S460MLOVAS
746144	376739/1	50	15,00	3050,0	12000	1		4.444	68859	S460MLOVAS
746144	376739/2	50	15,00	3050,0	12000	1		4.442	68859	S460MLOVAS
746144	378171/1	120	35,00	3050,0	12000	1		10.243	68859	S460MLOVAS
746144	378173/1	120	35,00	3050,0	12000	1		10.242	68859	S460MLOVAS
746144	380235/2	50	15,00	3050,0	12000	1		4.441	68859	S460MLOVAS
746144	380235/1	50	15,00	3050,0	12000	1		4.443	68859	S460MLOVAS
850330	379452/1	300	100,00	2500,0	10000	1		20.000	68859	S460MLOVAS
850331	378132/1	290	100,00	2500,0	6000	1		12.013	68859	S460MLOVAS
850331	378134/1	290	100,00	2500,0	5400	1		10.787	68859	S460MLOVAS
850331	379453/1	280	90,00	3000,0	10000	1		21.576	68859	S460MLOVAS
850331	379455/1	270	80,00	3000,0	11500	1		22.068	68859	S460MLOVAS
850331	379456/1	270	80,00	3000,0	11500	1		22.095	68859	S460MLOVAS
851546	378145/1	180	60,00	2500,0	12000	1		14.440	68859	S460MLOVAS
851546	378147/1	180	60,00	2500,0	12000	1		14.416	68859	S460MLOVAS
851546	378149/1	180	60,00	2500,0	12000	1		14.422	68859	S460MLOVAS
851546	378153/1	180	60,00	2500,0	12000	1		14.416	68859	S460MLOVAS
851546	379538/1	190	60,00	3050,0	12000	1		17.569	68859	S460MLOVAS
851546	379539/1	190	60,00	3050,0	12000	1		17.569	68859	S460MLOVAS
851546	379540/1	170	60,00	2051,0	12000	1		11.846	68859	S460MLOVAS
938874	374790/1	150	45,00	2051,0	12000	1		8.858	68859	S460MLOVAS
939468	376468/2	110	35,00	2051,0	12000	1		6.874	68859	S460MLOVAS
939468	378565/1	160	50,00	2500,0	12000	1		12.095	68859	S460MLOVAS
939470	376401/1	160	50,00	2500,0	12000	1		12.021	68859	S460MLOVAS
939470	376403/1	160	50,00	2500,0	12000	1		12.040	68859	S460MLOVAS
940083	379454/1	260	80,00	2500,0	12000	1		19.222	68859	S460MLOVAS
940083	381203/1	250	80,00	2051,0	12000	1		15.750	68859	S460MLOVAS
		Sum				40		520.857		

B14 - Supplementary information

length-deviation for plate(s) 378134/1: Customer accepted the deviation.

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B14 - Supplementary information

Dimensional tolerances acc. EN 10029/11
Flatness acc. EN 10029/11 class N
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
746144	.030	.337	1.620	.005	.0007	.035	.173	.170	.005	.162	.003	.036	.013	.0051	.0002	.0020	.0014	.0020	.0020	.0020	.36
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
741417	.029	.338	1.610	.008	.0009	.037	.171	.170	.006	.162	.005	.038	.012	.0039	.0003	.0020	.0018	.0030	.0020	.0020	.36
744016	.061	.374	1.590	.007	.0007	.042	.183	.280	.029	.164	.003	.028	.013	.0039	.0003	.0020	.0015	.0020	.0020	.0020	.40
745815	.059	.388	1.530	.007	.0008	.037	.183	.270	.027	.163	.004	.026	.013	.0050	.0002	.0020	.0023	.0020	.0020	.0020	.39
745817	.061	.379	1.510	.007	.0006	.036	.174	.270	.024	.160	.004	.028	.012	.0037	.0003	.0020	.0016	.0030	.0020	.0020	.38
746144	.030	.337	1.620	.005	.0007	.035	.173	.170	.005	.162	.003	.036	.013	.0051	.0002	.0020	.0014	.0020	.0020	.0020	.36
850330	.051	.193	1.540	.008	.0007	.032	.184	.490	.098	.022	.004	.026	.013	.0043	.0002	.0020	.0008	.0020	.0020	.0020	.40
850331	.050	.182	1.540	.007	.0006	.036	.176	.490	.120	.024	.004	.026	.012	.0049	.0002	.0020	.0008	.0020	.0020	.0020	.40
851546	.062	.387	1.570	.006	.0009	.029	.182	.270	.024	.158	.003	.027	.012	.0047	.0002	.0020	.0021	.0020	.0020	.0020	.39
938874	.030	.311	1.610	.007	.0007	.040	.175	.180	.013	.154	.004	.036	.012	.0050	.0003	.0020	.0013	.0030	.0020	.0020	.36
939468	.035	.343	1.610	.006	.0006	.037	.172	.170	.006	.159	.003	.037	.012	.0039	.0004	.0030	.0021	.0030	.0020	.0020	.36
939470	.031	.344	1.620	.005	.0003	.040	.171	.170	.010	.160	.003	.035	.012	.0045	.0002	.0030	.0011	.0020	.0020	.0020	.36
940083	.055	.185	1.540	.007	.0010	.028	.178	.520	.120	.037	.004	.028	.012	.0046	.0002	.0020	.0009	.0020	.0020	.0020	.41

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.23	.120	.130	
746144	.14	.039	.052	6.86
>=				2.00
Set values <=	.22	.120	.130	
741417	.14	.043	.055	9.49
744016	.18	.031	.044	10.77
745815	.17	.030	.043	7.40
745817	.17	.032	.044	9.73
746144	.14	.039	.052	6.86
850330	.16	.030	.043	7.44
850331	.16	.030	.042	7.35
851546	.18	.030	.042	6.17
938874	.14	.040	.052	8.00
939468	.15	.040	.052	9.49
939470	.14	.038	.050	8.89
940083	.17	.032	.044	6.09

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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LEVTNER Norbert

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	520		17.0			
Set values <=								700			93.00		
746144	376736	30,0	15.38	F	O	T	531	608	A5	20.0	87.36		
	376739	30,0	15.35	F	O	T	546	624	A5	18.5	87.52		
>=							420	520		17.0			
Set values <=								700			93.00		
741417	381394	30,0	30.17	F	O	T	530	592	A5	23.1	89.44		
746144	378173	30,0	35.66	F	O	T	550	622	A5	22.2	88.40		
939468	376468	30,0	35.65	F	O	T	515	613	A5	22.6	84.08		
>=							415	500		17.0			
Set values <=								675			93.00		
744016	381027	Ø	9.98	F	V	T	462	612	A5	27.5	75.42		
	381027	Ø	9.99	F	V	T	488	584	A5	28.2	83.56	001	1
745815	381028	Ø	9.97	F	V	T	443	592	A5	23.9	74.81		
	381028	Ø	9.98	F	V	T	500	591	A5	27.0	84.55	001	1
745817	379956	Ø	9.97	F	V	T	439	571	A5	29.9	76.84		
	379956	Ø	9.98	F	V	T	451	554	A5	29.6	81.37	001	1
851546	378145	Ø	9.97	F	V	T	437	595	A5	30.6	73.54		
	378147	Ø	9.98	F	V	T	474	618	A5	27.6	76.76		
	378153	Ø	9.98	F	V	T	449	614	A5	30.5	73.21		
	379539	Ø	9.98	F	V	T	458	609	A5	28.4	75.20		
	378145	Ø	9.98	F	V	T	470	569	A5	29.0	82.58	001	1
	378147	Ø	9.98	F	V	T	498	593	A5	27.8	84.07	001	1
	378153	Ø	9.97	F	V	T	508	599	A5	27.7	84.87	001	1
	379539	Ø	9.98	F	V	T	492	587	A5	28.2	83.86	001	1
938874	374790	Ø	9.99	F	V	T	479	583	A5	28.4	82.13		
	374790	Ø	9.99	F	V	T	496	573	A5	29.2	86.50	001	1
939468	378565	Ø	9.98	F	V	T	489	581	A5	26.7	84.07		
	378565	Ø	9.99	F	V	T	516	591	A5	28.8	87.32	001	1
939470	376401	Ø	9.96	F	V	T	489	584	A5	28.0	83.68		
	376401	Ø	9.99	F	V	T	524	596	A5	28.6	87.89	001	1
>=							405	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							405	500		17.0			
Set values <=								675			93.00		
745815	379458	Ø	9.98	F	V	T	421	570	A5	27.3	73.88		
	379459	Ø	9.98	F	V	T	434	580	A5	26.3	74.78		
	379458	Ø	9.97	F	V	T	459	561	A5	30.8	81.84	001	1
	379459	Ø	9.97	F	V	T	470	569	A5	28.4	82.69	001	1
745817	375380	Ø	10.00	F	V	T	424	570	A5	27.5	74.31		
	379460	Ø	9.95	F	V	T	432	579	A5	28.5	74.75		
	379461	Ø	9.98	F	V	T	434	584	A5	30.2	74.26		
	375380	Ø	9.97	F	V	T	473	571	A5	27.7	82.91	001	1
	379460	Ø	9.97	F	V	T	474	573	A5	27.8	82.62	001	1
	379461	Ø	9.97	F	V	T	462	563	A5	27.9	82.15	001	1
850331	379455	Ø	9.97	F	V	T	446	583	A5	28.9	76.45		
	379456	Ø	9.97	F	V	T	434	575	A5	28.4	75.48		
	379455	Ø	9.99	F	V	T	482	572	A5	27.9	84.29	001	1
	379456	Ø	9.99	F	V	T	495	582	A5	23.2	85.08	001	1
940083	379454	Ø	9.97	F	V	T	436	578	A5	24.9	75.52		
	379454	Ø	9.99	F	V	T	503	591	A5	26.9	85.18	001	1
>=							400	500		17.0			
Set values <=								675			93.00		
850330	372768	Ø	9.97	F	V	T	425	572	A5	27.1	74.36		
	379452	Ø	9.98	F	V	T	482	579	A5	26.2	83.24	001	1
850331	378132	Ø	9.98	F	V	T	412	559	A5	29.3	73.72		
	379453	Ø	9.96	F	V	T	411	559	A5	30.4	73.55		
	378132	Ø	9.97	F	V	T	462	555	A5	26.7	83.34	001	1
	379453	Ø	9.98	F	V	T	476	566	A5	30.5	84.09	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
741417	381394	CV 10x10	F	O	T	-40	340	334	337	337			
744016	381027	CV 10x10	F	O	T	-40	317	356	310	327			
	381027	CV 10x10	F	O	T	-40	232	270	263	255	001	1	
	381027	CV 10x10	F	K	T	-40	320	326	335	327			
	381027	CV 10x10	F	K	T	-40	258	273	244	258	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
745815	379458	CV 10x10	F	O	T	-40	326	262	273	287			
	379459	CV 10x10	F	O	T	-40	315	293	281	296			
	381028	CV 10x10	F	O	T	-40	320	317	307	315			
	379458	CV 10x10	F	O	T	-40	209	230	219	219	001	1	
	379459	CV 10x10	F	O	T	-40	236	244	46	175	001	1	
	381028	CV 10x10	F	O	T	-40	196	213	56	155	001	1	
	379458	CV 10x10	F	K	T	-40	43	161	138	114			
	379459	CV 10x10	F	K	T	-40	210	249	252	237			
	381028	CV 10x10	F	K	T	-40	71	293	261	208			
	379458	CV 10x10	F	K	T	-40	62	49	89	66	001	1	
	379459	CV 10x10	F	K	T	-40	270	193	45	169	001	1	
	381028	CV 10x10	F	K	T	-40	186	238	236	220	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
745817	375380	CV 10x10	F	O	T	-40	320	298	331	316			
	379460	CV 10x10	F	O	T	-40	310	287	343	313			
	379461	CV 10x10	F	O	T	-40	350	304	322	325			
	379956	CV 10x10	F	O	T	-40	322	343	359	342			
	375380	CV 10x10	F	O	T	-40	252	246	214	237	001	1	
	379460	CV 10x10	F	O	T	-40	241	246	228	238	001	1	
	379461	CV 10x10	F	O	T	-40	264	250	195	236	001	1	
	379956	CV 10x10	F	O	T	-40	248	303	303	285	001	1	
	375380	CV 10x10	F	K	T	-40	306	51	277	211			
	379460	CV 10x10	F	K	T	-40	346	76	52	158			
	379461	CV 10x10	F	K	T	-40	75	306	261	214			
	379956	CV 10x10	F	K	T	-40	352	311	365	343			
	375380	CV 10x10	F	K	T	-40	273	259	231	254	001	1	
	379460	CV 10x10	F	K	T	-40	228	60	53	114	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
745817	379461	CV 10x10	F	K	T	-40	267	278	260	269	001	1	
	379956	CV 10x10	F	K	T	-40	275	105	228	203	001	1	
746144	376736	CV 10x10	F	O	T	-40	380	391	383	385			
	378173	CV 10x10	F	O	T	-40	370	366	370	369			
850330	379452	CV 10x10	F	O	T	-40	330	282	335	316			
	379452	CV 10x10	F	O	T	-40	218	241	245	235	001	1	
	372768	CV 10x10	F	K	T	-40	228	231	149	203			
	379452	CV 10x10	F	K	T	-40	240	196	117	184	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
850331	378132	CV 10x10	F	O	T	-40	305	341	284	310			
	379453	CV 10x10	F	O	T	-40	350	343	349	347			
	379455	CV 10x10	F	O	T	-40	342	336	334	338			
	379456	CV 10x10	F	O	T	-40	348	333	288	323			
	378132	CV 10x10	F	O	T	-40	258	263	271	264	001	1	
	379453	CV 10x10	F	O	T	-40	316	315	326	319	001	1	
	379455	CV 10x10	F	O	T	-40	312	311	300	307	001	1	
	379456	CV 10x10	F	O	T	-40	301	260	311	290	001	1	
	378132	CV 10x10	F	K	T	-40	302	258	302	287			
	379453	CV 10x10	F	K	T	-40	347	331	271	316			
	379455	CV 10x10	F	K	T	-40	355	286	354	332			
	379456	CV 10x10	F	K	T	-40	48	336	300	228			
	378132	CV 10x10	F	K	T	-40	276	267	254	265	001	1	
	379453	CV 10x10	F	K	T	-40	335	302	253	296	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
850331	379455	CV 10x10	F	K		T	-40	317	227	234	259	001	1
	379456	CV 10x10	F	K		T	-40	194	220	303	239	001	1

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
851546	378145	CV 10x10	F	O	T	-40	296	323	301	307			
	378147	CV 10x10	F	O	T	-40	316	335	298	317			
	378153	CV 10x10	F	O	T	-40	328	299	338	322			
	379539	CV 10x10	F	O	T	-40	312	291	339	314			
	378145	CV 10x10	F	O	T	-40	262	291	268	274	001	1	
	378147	CV 10x10	F	O	T	-40	282	255	308	281	001	1	
	378153	CV 10x10	F	O	T	-40	253	261	257	257	001	1	
	379539	CV 10x10	F	O	T	-40	240	237	242	239	001	1	
	378145	CV 10x10	F	K	T	-40	288	269	295	284			
	378147	CV 10x10	F	K	T	-40	282	321	299	301			
	378153	CV 10x10	F	K	T	-40	272	282	289	281			
	379539	CV 10x10	F	K	T	-40	265	218	267	250			
	378145	CV 10x10	F	K	T	-40	344	333	317	331	001	1	
	378147	CV 10x10	F	K	T	-40	230	245	274	250	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
851546	378153	CV 10x10	F	K	T	-40	202	65	218	162	001	1	
	379539	CV 10x10	F	K	T	-40	67	48	66	60	001	1	
938874	374790	CV 10x10	F	O	T	-40	377	386	383	382			
	374790	CV 10x10	F	O	T	-40	346	349	356	350	001	1	
	374790	CV 10x10	F	K	T	-40	412	413	394	406			
	374790	CV 10x10	F	K	T	-40	370	371	380	373	001	1	
939468	376468	CV 10x10	F	O	T	-40	365	377	376	372			
	378565	CV 10x10	F	O	T	-40	357	357	351	355			
	378565	CV 10x10	F	O	T	-40	335	348	361	348	001	1	
	378565	CV 10x10	F	K	T	-40	351	363	365	360			
	378565	CV 10x10	F	K	T	-40	317	363	302	327	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
939470	376401	CV 10x10	F	O	T	-40	372	379	390	380			
	376401	CV 10x10	F	O	T	-40	357	354	348	353	001	1	
	376401	CV 10x10	F	K	T	-40	399	380	394	391			
	376401	CV 10x10	F	K	T	-40	385	88	365	279	001	1	
940083	379454	CV 10x10	F	O	T	-40	322	325	318	322			
	379454	CV 10x10	F	O	T	-40	288	243	293	275	001	1	
	379454	CV 10x10	F	K	T	-40	62	298	298	219			
	379454	CV 10x10	F	K	T	-40	240	224	221	229	001	1	
>= Set values <=						-40	29	29	29	46			
741417	333111	CV 10x10	F	ZB2	T	-40	330	339	342	337			strain aged 5%, 60 min. at 250°C
744016	381027	CV 10x10	F	ZB2	T	-40	307	298	53	220			strain aged 5%, 60 min. at 250°C
745815	379458	CV 10x10	F	ZB2	T	-40	37	243	55	112			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
745817	375380	CV 10x10	F	ZB2	T	-40	283	288	292	288			strain aged 5%, 60 min. at 250°C
746144	376736	CV 10x10	F	ZB2	T	-40	328	328	336	331			strain aged 5%, 60 min. at 250°C
	378173	CV 10x10	F	ZB2	T	-40	313	302	314	310			strain aged 5%, 60 min. at 250°C
850330	367080	CV 10x10	F	ZB2	T	-40	306	312	307	308			strain aged 5%, 60 min. at 250°C
850331	378132	CV 10x10	F	ZB2	T	-40	305	279	162	248			strain aged 5%, 60 min. at 250°C
851546	378153	CV 10x10	F	ZB2	T	-40	288	309	301	300			strain aged 5%, 60 min. at 250°C
938874	374790	CV 10x10	F	ZB2	T	-40	347	341	346	345			strain aged 5%, 60 min. at 250°C
939468	376468	CV 10x10	F	ZB2	T	-40	305	316	212	278			strain aged 5%, 60 min. at 250°C
	378565	CV 10x10	F	ZB2	T	-40	46	311	321	226			strain aged 5%, 60 min. at 250°C
939470	376401	CV 10x10	F	ZB2	T	-40	339	318	348	335			strain aged 5%, 60 min. at 250°C
940083	379454	CV 10x10	F	ZB2	T	-40	34	51	179	88			strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
741417	381394	F	OS	HV10	188	194	197
744016	381027	F	OS	HV10	251	257	248
745815	379459	F	OS	HV10	239	244	241
745817	375380	F	OS	HV10	221	218	221
746144	376736	F	OS	HV10	218	218	218
850330	367070	F	OS	HV10	186	188	191
850331	378132	F	OS	HV10	235	234	230
851546	378153	F	OS	HV10	235	227	227
938874	368867	F	OS	HV10	195	193	192
939468	374702	F	OS	HV10	199	199	201
939470	376466	F	OS	HV10	227	229	232
940083	379454	F	OS	HV10	240	237	226

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
741417	333111	Ø	9.99	F	S	553	553	552	79	77	78	78
746144	376736	Ø	5.96	F	S	616	614	614	82	82	83	82
	379700	Ø	9.97	F	S	565	563	563	83	83	81	82
939468	374702	Ø	9.94	F	S	596	596	595	79	83	81	81
>=						400	400	400	25	25	25	35
Set values <=												
744016	381027	Ø	9.99	F	S	599	602	598	79	76	77	78
745815	379459	Ø	10.02	F	S	581	580	584	78	77	80	78
745817	375380	Ø	9.99	F	S	570	574	573	76	78	68	74
850330	372768	Ø	10.02	F	S	570	570	571	78	80	77	78
850331	378132	Ø	10.00	F	S	560	558	557	78	78	79	78
	379456	Ø	9.99	F	S	574	575	577	79	81	81	80
851546	378153	Ø	10.01	F	S	594	598	596	73	77	73	74
938874	368867	Ø	10.02	F	S	563	566	566	83	84	84	84
939468	374702	Ø	9.94	F	S	596	596	595	79	83	81	81
939470	376466	Ø	9.95	F	S	578	579	582	80	85	82	82
940083	379454	Ø	9.99	F	S	581	581	579	76	79	76	77

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
746144	376736	.035	.335	1.620	.006	.0006	.036	.176	.170	.006	.160	.003	.036	.013	.0053	.0002	.0020	.0017	.0020	.0020
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0050	.0300	.0200	.0100
741417	338493	.030	.330	1.600	.007	.0007	.035	.170	.170	.005	.158	.004	.038	.011	.0042	.0002	.0020	.0017	.0020	.0020
744016	381027	.062	.368	1.560	.007	.0006	.039	.180	.280	.029	.164	.003	.026	.012	.0047	.0002	.0020	.0014	.0020	.0020
745815	379458	.060	.378	1.520	.007	.0008	.034	.185	.270	.027	.163	.003	.026	.012	.0053	.0002	.0020	.0020	.0020	.0020
	379459	.057	.375	1.520	.007	.0008	.036	.181	.270	.027	.162	.003	.025	.012	.0044	.0002	.0020	.0021	.0020	.0020
	380913	.057	.378	1.520	.008	.0009	.037	.175	.270	.028	.162	.003	.027	.013	.0032	.0002	.0020	.0022	.0030	.0020
745817	375380	.059	.373	1.510	.006	.0004	.035	.176	.270	.021	.154	.004	.025	.011	.0046	.0002	.0020	.0015	.0020	.0020
	379460	.060	.373	1.510	.006	.0006	.035	.177	.280	.022	.158	.004	.026	.011	.0045	.0002	.0020	.0016	.0020	.0020
	379461	.060	.375	1.520	.006	.0007	.034	.177	.280	.022	.159	.003	.027	.011	.0045	.0002	.0020	.0016	.0020	.0020
746144	378173	.030	.328	1.610	.006	.0006	.036	.171	.170	.007	.157	.003	.036	.013	.0039	.0002	.0020	.0018	.0020	.0020
850330	379452	.058	.189	1.520	.008	.0010	.031	.184	.490	.115	.024	.004	.025	.012	.0050	.0002	.0020	.0007	.0020	.0020
850331	378132	.048	.176	1.490	.006	.0009	.038	.177	.480	.119	.023	.004	.024	.011	.0043	.0002	.0020	.0009	.0020	.0020
	379453	.050	.181	1.520	.007	.0008	.037	.178	.500	.122	.024	.004	.025	.012	.0051	.0002	.0020	.0009	.0020	.0020
	379455	.049	.186	1.520	.007	.0009	.034	.183	.480	.114	.022	.004	.025	.012	.0046	.0002	.0020	.0009	.0020	.0020
	379456	.048	.180	1.530	.007	.0009	.038	.177	.500	.121	.024	.004	.026	.012	.0050	.0002	.0020	.0008	.0020	.0020
851546	378145	.060	.378	1.530	.006	.0009	.030	.176	.260	.025	.154	.003	.025	.012	.0042	.0003	.0020	.0020	.0030	.0020
	378147	.054	.375	1.520	.005	.0008	.031	.180	.260	.023	.153	.003	.024	.011	.0045	.0002	.0020	.0019	.0020	.0020
	378153	.060	.380	1.550	.006	.0008	.031	.180	.270	.023	.155	.003	.026	.012	.0047	.0002	.0020	.0018	.0020	.0020
	379539	.057	.384	1.560	.006	.0008	.029	.182	.270	.023	.158	.003	.026	.012	.0043	.0002	.0020	.0019	.0020	.0020
938874	374800	.034	.304	1.580	.006	.0004	.038	.170	.180	.012	.154	.003	.035	.012	.0049	.0002	.0020	.0012	.0020	.0020
939468	374702	.038	.342	1.600	.006	.0004	.036	.171	.180	.007	.157	.003	.036	.011	.0038	.0002	.0020	.0020	.0030	.0020
	374703	.041	.342	1.600	.005	.0005	.034	.176	.180	.006	.158	.003	.034	.011	.0052	.0002	.0020	.0018	.0020	.0020
939470	374698	.029	.337	1.620	.006	.0003	.042	.166	.170	.010	.159	.003	.036	.013	.0032	.0002	.0030	.0011	.0030	.0020
	376403	.028	.336	1.610	.006	.0006	.041	.165	.170	.011	.158	.003	.036	.013	.0031	.0002	.0020	.0013	.0030	.0020
940083	379454	.055	.194	1.540	.007	.0010	.031	.184	.490	.121	.037	.004	.027	.012	.0048	.0002	.0020	.0011	.0020	.0020

Z03
third party stamp

DNV
Witnessed Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2022-06-02
Sign: Antonio R. Zambrano C.
This document has been digitally signed and will therefore not have handwritten signatures.

Z02
Inspection representative voestalpine
Gröbming
LEITNER Norbert

voestalpine

voestalpine

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.41	.23	.120	.130	
746144	376736	.0020	.0020	.36	.15	.039	.052	6.79
>=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
741417	338493	.0020	.0020	.35	.14	.042	.053	8.33
744016	381027	.0020	.0020	.39	.18	.029	.041	8.30
745815	379458	.0020	.0020	.39	.17	.029	.041	6.42
	379459	.0020	.0020	.38	.17	.028	.040	8.18
	380913	.0020	.0020	.38	.17	.030	.043	11.56
745817	375380	.0020	.0020	.38	.17	.029	.040	7.61
	379460	.0020	.0020	.38	.17	.030	.041	7.78
	379461	.0020	.0020	.38	.17	.030	.041	7.56
746144	378173	.0020	.0020	.36	.14	.039	.052	9.23
850330	379452	.0020	.0020	.41	.17	.029	.041	6.20
850331	378132	.0020	.0020	.39	.16	.028	.039	8.84
	379453	.0020	.0020	.40	.16	.029	.041	7.25
	379455	.0020	.0020	.40	.16	.029	.041	7.39
	379456	.0020	.0020	.40	.16	.030	.042	7.60
851546	378145	.0020	.0020	.38	.17	.028	.040	7.14
	378147	.0020	.0020	.38	.17	.027	.038	6.89
	378153	.0020	.0020	.39	.17	.029	.041	6.60
	379539	.0020	.0020	.39	.17	.029	.041	6.74
938874	374800	.0020	.0020	.36	.14	.038	.050	7.76
939468	374702	.0020	.0020	.36	.15	.039	.050	9.47
	374703	.0020	.0020	.37	.15	.037	.048	6.54
939470	374698	.0020	.0020	.36	.14	.039	.052	13.13
	376403	.0020	.0020	.35	.14	.039	.052	13.23
940083	379454	.0020	.0020	.41	.17	.031	.043	6.46

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Z03
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DNV
~~Witnessed~~ Reviewed
And found to comply with
EN 10225-1 : 2019
Date 2022-06-02
Sign Antonio R. Zambrano C.
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Z02
Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine

voestalpine

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 150-300:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z03
third party stamp

DNV
~~Witnessed~~ Reviewed
And found to comply with
EN 10225-1 : 2019
Date: 2022-06-02
Sign: Antonio R. Zambrano C.

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Z02
Inspection representative voestalpine Grobblech
LEITNER Norbert

voestalpine

voestalpine

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 50, 80, 110, 120, 150
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 290, 300
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 100 mm, Edge zone transverse 100 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z03
third party stamp

DNV
~~Witnessed~~ Reviewed
And found to comply with
EN 10225-1 : 2019
Date 2022-06-02
Sign Antonio R. Zambrano C.
This document has been digitally signed and will therefore not have handwritten signatures.

Z02
Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine

voestalpine

Z03
third party stamp

DNV
Unreviewed Reviewed
And found to comply with:
EN 10225-1 : 2019
Date: 2022-06-02
Sign: Antonio R. Zambrano C.
This document has been digitally signed and will therefore not have handwritten signatures.

Z02
Inspection representative voestalpine
Grobblech
LINTNER Norbert

voestalpine

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Europe Steel Projects B.V.	1725000158	124A50A	Q012500058

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **25.03.2025**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Draft Only

Certificate Number: **AUT 2500081 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **5500117**

Date: **19-03-2025**

Order Status: **complete**

Inspection Dates
First: **07-03-2025**

final: **17-03-2025**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Kroger Staal B.V.**
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

Order No.: **28597, Rev. 0**

Description:

5 piece(s) of steel plate(s) **49905 kg** , as per attached inspection Certificate no.: **A0382579**

Specification

S355MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

Draft Only

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11 2021

19-MAR-2025

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2500081-1 K

Z02 Date 19-03-2025

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0382579	A08 Order-No.:	5500117	A07 OrderDat.	21-01-2025

400F

A06 Customer	Kroger Staal B.V. Oostelljke Randweg 40 NL-4782 PZ MOERDIJK	B01 Product	Plate		
		B02 Material	S355MLO Z35	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	28597, Rev. 0	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
124A50-SDA-00023 DOUGLAS DECK
ROSETTI PO 1725000158

B03 - Supplementary requirements
MATERIAL IS VACUUM DEGASSED, FINE GRAINED, FULLY KILLED AND PRODUCED BY BOF. // FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING. // MATERIAL IS ACC. TO DOC. 124A50-DDL-ST-SP-11061, REV. 00 // MATERIAL IS PRE-QUALIFIED AS PER EN10225-1 ANNEX E (ED. 2010) RESPECTIVELY ANNEX B (ED. 2019)

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130	42	Date of dispatch	reference no.
879004	343645/1	10	50,00	3100,0	9200	1		11.418	56321		17-03-2025	ROSETTI PO 1725000158
879004	343647/1	10	50,00	3100,0	9200	1		11.384	56321		17-03-2025	ROSETTI PO 1725000158
967555	344668/1	20	50,00	2600,0	9200	1		9.604	56462		19-03-2025	ROSETTI PO 1725000158
967555	344671/1	30	50,00	1650,0	9200	1		6.074	56462		19-03-2025	ROSETTI PO 1725000158
967555	346178/1	10	50,00	3100,0	9200	1		11.425	56321		17-03-2025	ROSETTI PO 1725000158
	Sum					5		49.905				

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Hossein Jafari
Signature
Date:
Ref. No.:
Office: Vienna
LRQA
LRQAGH 11.2021

19-MAR-2025

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ONE STEP AHEAD.

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Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=			1.000			.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.080	.300	.060	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.39
879004	.034	.350	1.400	.008	.0005	.042	.133	.012	.004	.011	.004	.027	.013	.0059	.0002	.0020	.0011	.0020	.0020	.0020	.30
967555	.034	.331	1.370	.006	.0008	.038	.132	.026	.008	.013	.004	.030	.013	.0058	.0003	.0020	.0009	.0020	.0020	.0020	.29

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.21	.060	.080	
879004	.12	.031	.044	7.12
967555	.12	.034	.047	6.55

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
H. Jafari
LRQA
19-MAR-2025

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						335	470		22.0	
Set values	<=							630			93.00
879004	343647	Ø	10.02	F	V	T	493	568	A5	28.4	86.80
967555	344671	Ø	9.99	F	V	T	457	559	A5	27.4	81.81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

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Z02
Inspection representative voestalpine
Gabriel Marco

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third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Hossein Jafari
Signature
Date:
Ref. No.:
Office: Vienna
LRQA
19-MAR-2025

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
879004	343647	CV 10x10	F	O	T	-40	346	335	343	341	
	343647	CV 10x10	F	K	T	-40	385	390	385	386	
967555	344671	CV 10x10	F	O	T	-40	344	354	354	351	
	344671	CV 10x10	F	K	T	-40	363	369	378	370	
>= Set values <=						-40	40	40	40	60	
879004	343647	CV 10x10	F	O	L	-40	379	377	365	374	
967555	344671	CV 10x10	F	O	L	-40	336	343	339	340	
>= Set values <=						-40	26	26	26	36	
879004	343647	CV 10x10	F	ZB2	T	-40	341	338	343	341	strain aged 5%, 60 min. at 250°C
967555	344671	CV 10x10	F	ZB2	T	-40	308	129	121	186	strain aged 5%, 60 min. at 250°C

C40;shape:

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Inspection representative voestalpine
Gabriel Marco

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third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
LRQA
LRQASM 11 2021

19-MAR-2025

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ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43	
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	samp.cond.
						°C	J	J	J	J	

CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

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Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office. Vienna
Signature
H. Jafari
LRQA

19-MAR-2025

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ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						376	376	376	25	25	25	35
Set values <=												
879004	337641	Ø	9.95	F	S	543	544	543	85	82	81	82
967555	344671	Ø	9.98	F	S	528	528	527	84	84	85	84

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=				1.000			.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.080	.300	.060	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
879004	338901	.034	.342	1.380	.009	.0004	.041	.127	.011	.004	.010	.003	.026	.013	.0046	.0002	.0020	.0011	.0020	.0020
967555	344671	.031	.340	1.530	.005	.0005	.039	.175	.019	.006	.013	.003	.041	.013	.0064	.0003	.0024	.0017	.0020	.0020

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Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
LRQA/GM 11.2021

19-MAR-2025

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
Set values >=								2.00
Set values <=		.0100	.0100	.39	.21	.060	.080	
879004	338901	.0020	.0020	.29	.12	.029	.042	8.91
967555	344671	.0020	.0020	.32	.13	.044	.057	6.09

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer. Melted and rolled in Austria.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
LRQA

19-MAR-2025

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "off-line - testing system" manufacturer: GMH Prüftechnik GmbH Nürnberg; Type: AUT GMHPT GBP Nr.: 16/4-2 311056-2111004
MUT (optional): USK7B or USK8B or USM35X or USM36 or Sonatest 380M or USM 100 or usmdmsgo+

PROBE
Offline AUT: S142 (5 Mhz) 3T-1R, S141 (4 Mhz) 3T/1R
MUT: SEB4T (4 Mhz), SEB4E (4 Mhz), MSEB4E (4 Mhz), B2S (2 Mhz)
Watergapcoupling

SURFACE CONDITION
Scaled surface - grinded or partially grinded, cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators min. Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) and Written Practice „NDT-WP" (according Recommended Practice SNT-TC-1A).
Operators min. Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Obereder Manfred

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Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Hossein Jafari
Date:
Ref. No.:
Office: Vienna
Signature
LRQASM 11.2021

19-MAR-2025

voestalpine
ONE STEP AHEAD.

RosettiMarino

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
Europe Steel Projects B.V.	1725000158	124A50A	Q012500033

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emilia 04.02.2025

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

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EUROPE
STEEL
CENTER

Europe Steel Projects B.V.

TRACEABILITY LIST

Our order nr: ESP132718
Your Po nr: 1725000158

Project 124A50-SDA-00023 – RFQ PLATES CANS NODES DOUGLAS DECK

ITEM	MATERIAL	Dimension Length in mm	Dimension Width in mm	Dimension Thickness in mm	Grade	CERTIFICATION	Quantity	Length in mm	Total qty m²	Total amount of meters	Weight/meter	Total Weight	Heatno	Plateno	MTC No	Mills name	C.o.O.
1	Plate	10700	3050	50	S355MLO Z35 EN10225	3.2 acc EN10204	1	10700	32,635	10,7	1.197,13	12.809,2	34925	615396 1	1451080 (74988)	Ilsenburg	Germany
2	Plate	10000	3050	50	S355MLO Z35 EN10225	3.2 acc EN10204	1	10000	30,5	10	1.197,13	11.971,3	34925	615398 1	1451083 (74989)	Ilsenburg	Germany
2	Plate	10000	3050	50	S355MLO Z35 EN10225	3.2 acc EN10204	1	10000	30,5	10	1.197,13	11.971,3	34925	616381 1	1451083 (74989)	Ilsenburg	Germany
3	Plate	9200	3100	50	S355MLO Z35 EN10225	3.2 acc EN10204	3	9200	85,56	27,6	1.216,75	33.582,3	to follow	to follow	to follow	Voest Alpine	Austria
4	Plate	9200	2600	50	S355MLO Z35 EN10225	3.2 acc EN10204	1	9200	23,92	9,2	1.020,50	9.388,6	to follow	to follow	to follow	Voest Alpine	Austria
5	Plate	9200	1650	50	S355MLO Z35 EN10225	3.2 acc EN10204	1	9200	15,18	9,2	647,63	5.958,2	to follow	to follow	to follow	Voest Alpine	Austria
							8					**85.680,79**					

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74988

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 1/8
Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
13	1	615395 1	34925	TM	50,00 x 3050,0 x 12000
13	1	615396 1*)	34925	TM	50,00 x 3050,0 x 10700
Σ	2	Gewicht Weight (B12) 27.175 kg kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

*) Lieferung gemäß der Tolerierungsanfrage Nr.: 1070023907
*) Delivery in accordance with tolerance request no.: 1070023907

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

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D. Kühne DNV Surveyor

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – DNV 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2121/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 2/8
Datum/Date 14.01.2025

Nr. (A07) Besteller Purchaser (A06)	Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	09.10.2024	Nr. (A07) Empfänger Customer (A06) Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214

Abnahme / Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,14	≤ 0,55	1,00 - 1,65	≤ 0,020	≤ 0,010	≤ 0,010	0,015-0,055	≤ 0,30	≤ 0,25	≤ 0,70
34925	0,06	0,48	1,53	0,011	0,001	0,004	0,045	0,02	0,04	0,38

Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,060	≤ 0,025	≤ 0,05	≤ 0,0008	≤ 0,08	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,21
34925	0,002	0,016	0,03	0,0001	0,01	0,002	0,002	0,000	0,001	0,16

Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %
	≤ 0,010	≤ 0,39	≤ 0,010	≤ 0,08		≤ 0,06
34925	0,000	0,35	0,000	0,05	0,45	0,03

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

Vakuumbehandelt
vacuum degassed

vollberuhigter Feinkornstahl
Fully killed and fine grained steel

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

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D. Kühne DNV Surveyor

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2122/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 3/8
Datum/Date 14.01.2025

Nr. (A07)	Order 6980	09.10.2024	Nr. (A07)	Order 6980	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214

Abnahme / Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,14	Si % ≤0,55	Mn % 1,00 – 1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
615396	34925	0,07	0,48	1,52	0,010	0,001	0,005	0,046	0,01
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,060	Ti % ≤0,025	Nb % ≤0,05	Mo % ≤0,08	B % ≤0,0008	EV1 1) % ≤0,21
615396	34925	0,03	0,38	0,001	0,015	0,03	0,003	0,0003	0,17
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤0,39	EV3 3) %	EV4 4) % ≤0,08	Nb+V % ≤0,06				
615396	34925	0,36	0,42	0,05	0,03				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti

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D. Kühne DNV Surveyor

DNV – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2123/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 4/8
Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa ≥ 335	Zugfestigkeit Tensile strength (C12) Rm MPa 470 - 630	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 22	
615395	34925	K4G	Q	TM	P	457	530	0,81	28	
615395	34925	K4G	Q	TS	P	468	529	0,83	30	
615396	34925	K4G	Q	TM	P	431	519	0,78	29	
615396	34925	K4G	Q	TS	P	461	522	0,83	30	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

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D. Kühne DNV Surveyor

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2124/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
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Datum/Date 14.01.2025

Nr. (A07) Besteller Purchaser (A06)	Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	09.10.2024	Nr. (A07) Empfänger Customer (A06) Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214

Abnahme / Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35	
615396	34925	K4	TM	60	73	75	69	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥376	2	3		
615396	34925	K4	TM	544	518	519		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average

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D. Kühne DNV Surveyor

DNV 1864 – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron
2125/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 6/8
Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
615396	34925	K4O	Q	A5	KV600	-040	276	280	284	280
615396	34925	K4O	Q	TM	KV600	-040	258	255	277	263
615396	34925	K4O	Q	TS	KV600	-040	288	335	253	292
615396	34925	K4H	Q	TM	KV600	-040	299	44	230	191
615396	34925	K4H	Q	TS	KV600	-040	274	37	237	183

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) H: 1/2 Dicke / 1/2 Thickness
O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

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D. Kühne DNV Surveyor

DNV – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2126/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 7/8
Datum/Date 14.01.2025

Nr. (A07) Besteller Purchaser (A06)	Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	09.10.2024	Nr. (A07) Empfänger Customer (A06)	Order 6980 Kröger Staal B.V. 4780 AA MOERDIJK NIEDERLANDE	

Erzeugnis Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. Works order No. (A08): 0000120214

Abnahme Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39) HV10			
615396	34925	K4		TM	161			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgetesting: E3
Results: No faults were found.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

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D. Kühne DNV Surveyor

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

2127/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451080**
Seite/Page 8/8
Datum/Date 14.01.2025

Nr. (A07)	Order 6980	09.10.2024	Nr. (A07)	Order 6980	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214

Abnahme / Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgende Dokumente:
- ILG_2016-01_S355 G9/G10+M; S420 G1/G2+M
- ILG_2014_S355 G9/G10+M; S420 G1/G2+M Rev.1

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- ILG_2016-01_S355 G9/G10+M; S420 G1/G2+M
- ILG_2014_S355 G9/G10+M; S420 G1/G2+M Rev.1

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.
EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.
EPD acc. to EN 15804 + A2 & ISO 14025

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D. Kühne DNV Surveyor

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2128/ 3402

74989

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
Seite/Page 1/8
Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Lieferschein-Nr. 0091848234
Dispatch note No. 10.01.2025

Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
14	1	615398 1	34925	TM	50,00 x 3050,0 x 16000
14	1	616381 1	34925	TM	50,00 x 3050,0 x 16000
Σ	2	Gewicht Weight (B12) 38.308 kg kgs		TM: thermomechanisch gewalzt / thermomechanically rolled	

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

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DNV 1864 — SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2129/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
Seite/Page 2/8
Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Lieferschein-Nr. 0091848234
Dispatch note No. 10.01.2025

Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C %	Si %	Mn %	P %	S %	N %	Al %	Cu %	Cr %	Ni %
	≤ 0,14	≤ 0,55	1,00 - 1,65	≤ 0,020	≤ 0,010	≤ 0,010	0,015-0,055	≤ 0,30	≤ 0,25	≤ 0,70
34925	0,06	0,48	1,53	0,011	0,001	0,004	0,045	0,02	0,04	0,38
Schmelzen-Nr. Heat No. (B07)	V %	Ti %	Nb %	B %	Mo %	As %	Sn %	Pb %	Ca %	EV1 1) %
	≤ 0,060	≤ 0,025	≤ 0,05	≤ 0,0008	≤ 0,08	≤ 0,030	≤ 0,020	≤ 0,010	≤ 0,005	≤ 0,21
34925	0,002	0,016	0,03	0,0001	0,01	0,002	0,002	0,000	0,001	0,16
Schmelzen-Nr. Heat No. (B07)	Sb %	EV2 2) %	Bi %	EV3 3) %	EV4 4) %	Nb+V %				
	≤ 0,010	≤ 0,39	≤ 0,010	≤ 0,08		≤ 0,06				
34925	0,000	0,35	0,000	0,05	0,45	0,03				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

Vakuumbehandelt
vacuum degassed

vollberuhigter Feinkornstahl
Fully killed and fine grained steel

Erschmolzen und hergestellt in Deutschland
Melted and manufactured in Germany

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DNV - SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron
2130/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
Seite/Page 3/8
Datum/Date 14.01.2025

Nr. (A07)	Order 6980	09.10.2024	Nr. (A07)	Order 6980	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product / (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214
Lieferschein-Nr. / Dispatch note No.: 0091848234 / 10.01.2025
Abnahme / Inspection (A05): NV / **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,14	Si % ≤ 0,55	Mn % 1,00 - 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
616381	34925	0,06	0,47	1,56	0,009	0,002	0,003	0,046	0,02
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,060	Ti % ≤ 0,025	Nb % ≤ 0,05	Mo % ≤ 0,08	B % ≤ 0,0008	EV1 1) % ≤ 0,21
616381	34925	0,04	0,41	0,002	0,017	0,03	0,01	0,0004	0,17
Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) % ≤ 0,39	EV3 3) %	EV4 4) % ≤ 0,08	Nb+V % ≤ 0,06				
616381	34925	0,36	0,48	0,05	0,03				

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti

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DNV - SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2131/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
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Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024 Nr. (A07) Order 6980
Besteller Kröger Staal B.V. Empfänger Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE (A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Lieferschein-Nr. 0091848234
Dispatch note No. 10.01.2025

Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH MPa ≥ 335	Zugfestigkeit Tensile strength (C12) Rm MPa 470 - 630	Rp0,2/Rm Rp0,2/Rm ≤ 0,93	Bruchdehnung Elongation (C13) A5 7) % ≥ 22	
615398	34925	K4G	Q	TM	P	478	540	0,85	27	
615398	34925	K4G	Q	TS	P	485	540	0,84	30	
616381	34925	K4G	Q	TM	P	477	536	0,83	27	
616381	34925	K4G	Q	TS	P	483	533	0,85	30	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So

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D. Kühne DNV Surveyor

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2132/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
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Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Lieferschein-Nr. 0091848234
Dispatch note No. 10.01.2025

Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35
616381	34925	K4	TM	74	74	78	75

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 MPa ≥376	2	3
616381	34925	K4	TM	537	536	548

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average

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D. Kühne DNV Surveyor

DNV 1864 SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2133/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
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Datum/Date 14.01.2025

Nr. (A07) Order 6980 09.10.2024
Besteller Kröger Staal B.V.
Purchaser 4780 AA MOERDIJK
(A06) NIEDERLANDE

Nr. (A07) Order 6980
Empfänger Kröger Staal B.V.
Customer 4780 AA MOERDIJK
(A06) NIEDERLANDE

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werksauftrags-Nr. 0000120214
Works order No.
(A08)
Lieferschein-Nr. 0091848234
Dispatch note No. 10.01.2025

Abnahme NV
Inspection **N142Y18X**
(A05)

Werkstoff und Lieferbedingung S355MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/2019
(B02-B03) MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
615396 *)	34925	K4O	Q	A5	KV600	-040	276	280	284	280
615398	34925	K4O	Q	TM	KV600	-040	255	42	287	195
615398	34925	K4O	Q	TS	KV600	-040	243	287	256	262
615398	34925	K4H	Q	TM	KV600	-040	255	275	86	205
615398	34925	K4H	Q	TS	KV600	-040	161	45	246	151
616381	34925	K4O	Q	A5	KV600	-040	285	308	280	291
616381	34925	K4O	Q	TM	KV600	-040	308	284	319	304
616381	34925	K4O	Q	TS	KV600	-040	296	331	343	323
616381	34925	K4H	Q	TM	KV600	-040	293	277	260	277
616381	34925	K4H	Q	TS	KV600	-040	300	154	298	251

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) H: 1/2 Dicke / 1/2 Thickness
O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
TM: thermomechanisch gewalzt / thermomechanically rolled
TS: simulierte Wärmebehandlung / simulated heat treatment
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5,00 % plastische Verformung
60 min bei 250 C gealtert

Treatment of testcoupons:
A5: 5,00 % plastically strained
60 min aged at 250 C

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D. Kühne DNV Surveyor

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - DNV 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

2134/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
Seite/Page 7/8
Datum/Date 14.01.2025

Nr. (A07)	Order 6980	09.10.2024	Nr. (A07)	Order 6980	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214
Lieferschein-Nr. / Dispatch note No.: 0091848234 / 10.01.2025
Abnahme / Inspection (A05): NV **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Weitere Prüfungen / Other tests (C50-C69)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Härteprüfung Hardness test (C30-C39)			
					HV10			
616381	34925	K4		TM	168			

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
5) TM: thermomechanisch gewalzt / thermomechanically rolled

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99 in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Behandlung der Testcoupons: PWHT: S
Temperatur: 580 +/-10°C
Haltezeit: 1h/inch
danach Abkühlung an ruhender Luft

Heat treatment of testcoupons: PWHT: S
Temperature: 580 +/-10°C
Holding time: 1h/inch
Then cooling in still air.

Draft Only

D. Kühne DNV Surveyor

DNV – SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT – 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03): AJ

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2135/ 3402

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1451083**
Seite/Page 8/8
Datum/Date 14.01.2025

Nr. (A07)	Order 6980	09.10.2024	Nr. (A07)	Order 6980	
Besteller	Kröger Staal B.V.		Empfänger	Kröger Staal B.V.	
Purchaser	4780 AA MOERDIJK		Customer	4780 AA MOERDIJK	
(A06)	NIEDERLANDE		(A06)	NIEDERLANDE	

Erzeugnis / Product / (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000120214

Lieferschein-Nr. / Dispatch note No.: 0091848234 / 10.01.2025

Abnahme / Inspection (A05): NV / **N142Y18X**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S355MLO Z35
DIN EN 10225-1 11/2019
MDS-Y20 R.6
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05
S3MLOILG
Application onboard DNV- classed objects is subject to special consideration.

Zusätzliche Anforderung 17 der EN 10225-1:2019 entsprechend
Option 18 der EN 10225:2009:
Verifiziert durch folgende Dokumente:
- ILG_2016-01_S355 G9/G10+M; S420 G1/G2+M
- ILG_2014_S355 G9/G10+M; S420 G1/G2+M Rev.1

Option 17 of EN 10225-1:2019 according to Option 18 of EN 10225:2009:
Verified by following documents:
- ILG_2016-01_S355 G9/G10+M; S420 G1/G2+M
- ILG_2014_S355 G9/G10+M; S420 G1/G2+M Rev.1

Material gem. Optionen 1,6,7,9,11,12,17 der EN 10225-1:2019
Material according to options 1,6,7,9,11,12,17 of EN 10225-1:2019

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung
der Grenzwerte der Strahlenschutzverordnung(StrlSchV)
für die uneingeschränkte Freigabe von festen Stoffen
(StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte
Nuklide gewährleistet, wird nicht überschritten.

EPD gemäß EN 15804 + A2 & ISO 14025

Our products are free of radioactive substances and
do not exceed the clearing limit value of 100 Bq/kg,
which guarantees the compliance with limit values
given in the Radiation Protection Ordinance(StrlSchV)
for the unrestricted clearance of solid material
(StrlSchV Annex 4, Table 1, Section 3) for ferrous nuclides.

EPD acc. to EN 15804 + A2 & ISO 14025

Draft only

D. Kühne DNV Surveyor

DNV - SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 1864

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

2136/ 3402

TotalEnergies	FENIX OFFSHORE PROJECT		Document Reference: AR-FEN-00-RM03-300012	
	INSPECTION & TEST PLAN - MANUFACTURED SECTIONS		Revision: 00	Status: IFR
			Contract / P.O. N°: 1722000931	ROSETTI MARINO
Discipline: QUA	System & Sub-sys:	Phase: DE	Page 1 of 5	
Document Type: PRC	Equipment Type:	Class: 1		

SOURCE DOCUMENT:

REFERENCE:

Document Title	Document Number
Material Certificate WPQT item	1792-L01-0001-00

Q012202443

DOCUMENT QUALIFICATION		NEXT EMISSION	
APPROVED FOR CONSTRUCTION (UNLESS OTHERWISE STATED BELOW)		AFC - APC Stamp (IF APC QUALIFIED)	
APPROVED FOR CONSTRUCTION EXCEPT OBSERVATIONS		IFR	
OBSERVED		IFA	
VIEWED		SPD	
REJECTED		CLD	

Rev.	Status	Date	Description	Issued by	Checked by	Approved by
00	IFR	16-Aug-2022	Issued for Review	A. GROTEPASS	P. GRENIER	A. KREUTZ

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End User / Client	TOTAL AUSTRAL / ROSETTI MARINO / PM PIPING
P.O. No. (TOTAL/RM/PM)	1722000931 / 112A10A / 5279-22
Project Name	FENIX Phase 1 Development Project
Description of Products	SAWL Carbon Steel Welded Tubulars and Cans
Manufacture Specification	API 2B, AR-FEN-00DOEC-364003(R01), AR-FEN-00DOEC-364004(R01), GS EP STR 201(R15) & 301(R17)
Material Specification	GS EP STR 201(R15) S355, S420

PRODUCT CERTIFICATE

[EN 10204 3.2]

Document No.		CW-PC-FENIX-001 (Rev.1)	
Date of Issue	Page	Aug. 16th. 2022	1 / 1

CWBD CHANGWON BENDING CO.,LTD

JUCHON FACILITY 103-19, Golden root-ro, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea

SAENGRIM FACILITY 59, Saengrim-daero 713beon-gil, Saengrim-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea

No.	Identification No.	Item No.	Category	Designation	Size [mm] 1) OD	2) T	3) L	PCS	Weight [Kg]	Plate Material	Plate No.	Heat No.	MTC No.	4) Welding Log No.	5) NDT Reoprt No. VT	UT	6) DC UT	MT	7) DIM & VI Report No.	Production Test Part	8) Report No.	Remark
1	CW-WPQ-001	314	Special	Tubular	610	20.00	2,300	1	669	S420 KT-40	PB70950403	SF56695	220527-FP01PI-0386A1-0001	L-S-001	SL-V-001	SL-U-001-1	SL-U-001-2	SL-M-001	S-001	Weld	2475-01	WPQ.D02 - Deck
2	CW-WPQ-002	315	Special	Tubular	508	20.00	3,450	1	830	S420 KT-40 Z35	PB72311701	SF56697	220802-FP01PI-0080A4-0001	L-S-001	SL-V-001	SL-U-001-1	SL-U-001-2	SL-M-001	S-001	Base/Weld	2475-04 / 2475-02	WPQ.J01 - Jacket
3	CW-WPQ-003	316	Special	Tubular	914	50.00	3,450	1	3,676	S420 KT-40 Z35	PB71625902	SB51709	220712-FP01PI-0025A3-0001	L-S-001	SL-V-002	SL-U-002-1	SL-U-002-2	SL-M-002	S-001	Base/Weld	2475-05 / 2475-03	WPQ.J02 - Jacket
										~ B L A N K ~												
				Total				3	5,175													

[Abbrevition] *1) OD : Outside Diameter *2) T : Thickness *3) L : Length *4) CW-LWSL/CWSL-FENIX-S/J-000 : L/C-S/J-000 *5) KNDE-KH-CW-SL/JC-22-FEN-V/U/M-000 : SL/JC-V/U/M-000 *6) DC : Double Check *7) CW-DV-FENIX-S/J-000 : S/J-000 *8) KJ22-0000-00 : 0000-00

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER.

Q.A. Team Manager	PM PIPING	ROSETTI MARINO	TOTAL AUSTRAL	TPI 3.2 (ABS)
D. C. SEO	PM PIPING SCOTT (KL) LEE -W -R 2022 -08- 16	M S KIM 2022 .08. 16 ○WITNESSED ○REVIEWED OBO R.M.G.	obo Intersica ☐Review ☐Witness C.Y CHO 2022 .08. 16	ABS CONSULTING 16 Aug. 2022

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220527-FP01PI-0386A1-0001
Date of Issue/발행일자 : May., 27, 2022

Order No./계약번호 : 01S5540668
PO No./주문번호 : PENIX PJT 6.1.1

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40

Size/치수	Product No. /제품번호	Quantity /수량	Weight /중량 (kg)	Heat No. /제강번호	Position	Tensile Test /인장시험 YP (MPa)	TS	EL (%)	YR (%)	Impact Test /충격시험 V Notch -40 ℃ Energy (Joule)	U.S.T		Division	Chemical Composition/화학성분 C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	H (ppm)	Mo (%)	N (ppm)	Nb (%)
20x1859x9004	PB70950403	1	2,628	SF56695	T	467	558	25	84	1: 338 2: 359 3: 350 A: 349	Good		L	0.0841	0.197	1.555	0.0065	0.0018	0.027	0.384	1	0.168	1.1	0.003	38	0.013
													P	0.0820	0.201	1.551	0.0056	0.0014	0.025	0.381	1	0.163		0.009	36	0.013

** Specimen No : Tension => PP27357903 Impact => PP27357903
*** Sub Total (100) *** 1 2,628 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

*** Heat Treatment ===> Thermo Mechanical Rolling + Accelerated Cooling ***
*** Grade Total *** 1 2,628 (kg)
*** Grand Total *** 1 2,628 (kg)

=== Last Item ===

CHANGWON BENDING CO., LTD. QA/QC
ACCEPTED
REVIEWED
WITNESSED
Date / Signature:
Aug. 02. 2022.

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03
OBO R.M.G.

WITNESSED
REVIEWED

obo Intersica
Review
Witness
C.Y.CHO
2022 -08- 03

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A。(Rectangular), YP Method : 0.2 % off-set
* Impact Test. Direction : Surface Transversal, Full-Size : 10 mmX10 mm
* U.S.T : Ultrasonic Test.
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

ABS GROUP 17781 ABS(CONSULTING)
Surveyor To

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

T.C.BAE

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220527-FP01PI-0386A1-0001
Date of Issue/발행일자 : May., 27, 2022

Order No./계약번호 : 01S5540668
PO No./주문번호 : PENIX PJT 6.1.1

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40

Product No. /제품번호	Division	Ti (%)	V (%)	Total-Al (%)	CEQ (%)	PCM (%)
PB70950403	L	0.0125	0.002	0.030	0.39	0.19
	P	0.0121	0.002	0.030	0.38	0.18
*** Sub Total (100) ***			1	2,628 (kg)		
*** Grade Total ***			1	2,628 (kg)		
*** Grand Total ***			1	2,628 (kg)		

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

=== Last Item ===

CWBO QA/QC ☑ ACCEPTED ☐ REVIEWED ☐ WITNESSED
Date / Signature: 2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03
OBO R.M.G.

☐ WITNESSED
☑ REVIEWED

obo Intersica
☐ Review
☐ Witness
C.Y.CHO
2022 -08- 03

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

ABS CONSULTING 17781 ABS GROUP COMPANIES (CONSULTING)
Surveyor To :

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

T.C.BAE

posco

Ultrasonic Test Report
초음파탐상시험성적서

Certificate No./증명서번호 : 220527-FP01PI-0386A1-0001
Date of Issue/발행일자 : May., 27, 2022
AR-FEN-00-RM03-300012

Order No./계약번호 : 01S5540668
PO No./주문번호 : PENIX PJT 6.1.1

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40

Product No. /제품번호	Ultrasonic Test						Remarks
	Examination Method	Apparatus	Transducer	Frequency (MHz)	Sensitivity	Test Result	
PB70950403	2	1	1	5	H	1	1. Application Spec. : EN10160(1999) S1/E2
*** Sub Total (100) ***		1	2,628 (kg)				2. We hereby certity that the material described herein has been examined in accordance with above ultrasonic specification and fully conformed thereto.
*** Grade Total ***		1	2,628 (kg)				
*** Grand Total ***		1	2,628 (kg)				
			=== Last Item ===				

ACCEPTED
REVIEWED
WITNESSED
Date / Signature:
Aug. 02. 2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03
OBO R.M.G.

WITNESSED
REVIEWED

obo Intersica
Review
Witness
C.Y.CHO
2022 -08- 03

* Couplant : Water
* Examination method(1:Direct straight Beam, 2:Direct double beam, 3:Others)
* Apparatus(1 : Digital Flaw Detector, 2: Others)
* Transducer(1: ¢ 20 ㎜, 2: ¢ 24 ㎜, 3: ¢ 25 ㎜ or 25 ㎜ square, 4: ¢ 30 ㎜, 5:8~12.5 ㎜, 9:others)
* Sensitivity(A:RB-D-1_0=50 %+10DB, B:STB-N_1=50 %, C:STB-N_1=70 %, D:STB-G.$V_{1.5\text{-}4.0}$=50 %, E:STB-G.$V_{1.5\text{-}4.0}$=80 %, F:STB-G.$V_{1.5\text{-}2.8}$=50 %, G:BG=75±5 %, H: ¢ 5.0 ㎜DAC, I: ¢ 11.0 ㎜DAC, J: ¢ 8.0 ㎜DAC, K:GB-T2970 Sensitivity, L:BG=100 %, M: ¢ 5.0 ㎜FBH=60 %, N:Soviet 75ATM Sens., O:BS5996-93 Sens, P: ¢ 6.0 ㎜DAC, X:Others)
* Test Result (1: Good, 2: Acceptable)

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

Surveyor's No. : 17781 (AMS(CONSULTING))

T.C.BAE

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220712-FP01PI-0025A3-0001
Date of Issue/발행일자 : Jul., 12, 2022

Order No./계약번호 : 01S5540817
PO No./주문번호 : PENIX PJT 7.1.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Size/치수	Product No. /제품번호	Quantity /수량	Weight /중량 (kg)	Heat No. /제강번호	Position	Tensile Test /인장시험 YP (MPa)	TS	EL (%)	YR (%)	Z-Direction Tensile Test TS (MPa)	RA (%)	Impact Test /충격시험 V Notch -40 ℃ Energy (Joule)	Strain Ageing Impact Test V Notch Strain 6.3% (-40 ℃, 60min) Energy (Joule)	U.S.T	Division	Chemical Composition/화학성분 C (%)	Si (%)	Mn (%)	P (%)	S (%)
50x2754x7940	PB71625902	1	8,584	SB51709	T	476	580	24	82	A: 558	1: 74 2: 76 3: 71 A: 74	1: 335 2: 351 3: 330 A: 339	1: 326 2: 293 3: 303 A: 307	Good	L	0.0807	0.195	1.549	0.0052	0.0011
															P	0.0788	0.190	1.522	0.0050	0.0009
					B					A: 544	1: 74 2: 80 3: 73 A: 76									

** Specimen No : Tension => PP27443112 Z-Tension => PP27443112 Impact => PP27443112
*** Sub Total (030) *** 1 8,584 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

*** Heat Treatment ===> Thermo Mechanical Rolling + Accelerated Cooling ***
*** Grade Total *** 1 8,584 (kg)
*** Grand Total *** 1 8,584 (kg)

=== Last Item ===

CWBD Inspector ☐ ACCEPTED ☑ REVIEWED ☐ WITNESSED
Date / Signature: Aug. 02 2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03
OBO R.M.G.

☐WITNESSED
☑REVIEWED

obo Intersica
☑ Review
☐ Witness
C.Y.CHO
2022 -08- 03

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A。(Rectangular), YP Method : 0.2 % off-set
* Z-Direction Tensile Test (TTT or TTP) - Dia : 10 ㎜
* Impact Test. Direction : Surface Transversal, Full-Size : 10 ㎜X10 ㎜
* Strain Ageing Impact Test. Direction : Surface Transversal, Full-Size : 10 ㎜X10 ㎜, SF(Shear Fracture), Ageing Temperature : 250 ℃, Ageing Time : 60 min., Strain : 6.3 %
* U.S.T : Ultrasonic Test.
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

Surveyor To. ABS(CONSULTING) 17781

T.C.BAE

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220712-FP01PI-0025A3-0001
Date of Issue/발행일자 : Jul., 12, 2022

Order No./계약번호 : 01S5540817
PO No./주문번호 : PENIX PJT 7.1.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Product No. /제품번호	Division	Cr (%)	Ni (%)	As (%)	B (ppm)	Bi (%)	Ca (ppm)	Cu (%)	H (ppm)	Mo (%)	N (ppm)	Nb (%)	Pb (%)	Sb (%)	Sn (%)	Ti (%)	V (%)	Sol-Al (%)	Total-Al (%)	CEQ (%)	PCM (%)
PB71625902	L	0.024	0.539	0.004	1	0.000	11	0.231	1.1	0.003	31	0.013	0.0000	0.001	0.003	0.0100	0.003	0.030	0.032	0.40	0.19
	P	0.022	0.545		1			0.228		0.002	37	0.012				0.0096	0.002	0.031	0.032	0.39	0.18

*** Sub Total (030) *** 1 8,584 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

*** Grade Total *** 1 8,584 (kg)
*** Grand Total *** 1 8,584 (kg)

=== Last Item ===

CWB0104nc ☐ ACCEPTED ☑ REVIEWED ☐ WITNESSED
Date / Signature: Aug. 02. 2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 0 3

M S KIM
2022 .08. 0 3
OBO R.M.G.

OWITNESSED
OREVIEWED

obo Intersica
☐Review
☐Witness
C.Y.CHO
2022 -08- 0 3

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

ABS CONSULTING AMERICAS GROUP COMPANY 17781

Surveyed To: ABS (CONSULTING)

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

T.C.BAE

posco

Ultrasonic Test Report
초음파탐상시험성적서

Certificate No./증명서번호 : 220712-FP01PI-0025A3-0001
Date of Issue/발행일자 : Jul., 12, 2022
AR-FEN-00-RM03-300012

Order No./계약번호 : 01S5540817
PO No./주문번호 : PENIX PJT 7.1.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Product No. /제품번호	Ultrasonic Test						Remarks
	Examination Method	Apparatus	Transducer	Frequency (MHz)	Sensitivity	Test Result	
PB71625902	2	1	1	5	H	1	1. Application Spec. : EN10160(1999) S3/E4 ✓
*** Sub Total (030) ***		1	8,584 (kg)				2. We hereby certity that the material described herein has been examined in accordance with above ultrasonic specification and fully conformed thereto.
*** Grade Total ***		1	8,584 (kg)				
*** Grand Total ***		1	8,584 (kg)				
			=== Last Item ===				

CWBO QA/QC
☑ ACCEPTED
☑ REVIEWED
☐ WITNESSED
Date / Signature:
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 0 3

M S KIM
2022 .08. 0 3
OBO R.M.G.

☐WITNESSED
☑REVIEWED

obo Intersica
☑ Review
☐ Witness
C.Y.CHO
2022 -08- 0 3

* Couplant : Water
* Examination method(1:Direct straight Beam, 2:Direct double beam, 3:Others)
* Apparatus(1 : Digital Flaw Detector, 2: Others)
* Transducer(1: ¢ 20 ㎜, 2: ¢ 24 ㎜, 3: ¢ 25 ㎜ or 25 ㎜ square, 4: ¢ 30 ㎜, 5:8~12.5 ㎜, 9:others)
* Sensitivity(A:RB-D-1_0=50 %+10DB, B:STB-N_1=50 %, C:STB-N_1=70 %, D:STB-G.$V_{1.5\text{-}4.0}$=50 %, E:STB-G.$V_{1.5\text{-}4.0}$=80 %, F:STB-G.$V_{1.5\text{-}2.8}$=50 %, G:BG=75±5 %, H: ¢ 5.0 ㎜DAC, I: ¢ 11.0 ㎜DAC, J: ¢ 8.0 ㎜DAC, K:GB-T2970 Sensitivity, L:BG=100 %, M: ¢ 5.0 ㎜FBH=60 %, N:Soviet 75ATM Sens., O:BS5996-93 Sens, P: ¢ 6.0 ㎜DAC, Q:Others)
* Test Result (1: Good, 2: Acceptable)

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

Surveyor To. 17781 AMG(CONSULTING)

T.C.BAE

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220802-FP01PI-0080A4-0001
Date of Issue/발행일자 : Aug., 02, 2022

Order No./계약번호 : 01S5546935
PO No./주문번호 : PENIX PJT 7.2.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Size/치수	Product No. /제품번호	Quantity /수량	Weight /중량 (kg)	Heat No. /제강번호	Position	Tensile Test /인장시험 YP (MPa)	TS	EL (%)	YR (%)	Z-Direction Tensile Test TS (MPa)	RA (%)	Impact Test /충격시험 V Notch -40 ℃ Energy (Joule)	Strain Ageing Impact Test V Notch Strain 6.3% (-40 ℃, 60min) Energy (Joule)	U.S.T	Division	Chemical Composition/화학성분 C (%)	Si (%)	Mn (%)	P (%)	S (%)
20x1538x8300	PB72311701	1	2,005	SF56697	T	444	549	27	81	A: 554	1: 76	1: 333	1: 303	Good	L	0.0839	0.187	1.555	0.0067	0.0017
											2: 75	2: 334	2: 228		P	0.0788	0.187	1.542	0.0063	0.0011
											3: 75	3: 351	3: 275							
											A: 75	A: 339	A: 269							
					B					A: 537	1: 76									
											2: 75									
											3: 75									
											A: 75									

** Specimen No : Tension => PP27358019 Z-Tension => PP27358019 Impact => PP27358019
*** Sub Total (050) *** 1 2,005 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

*** Heat Treatment ===> Thermo Mechanical Rolling + Accelerated Cooling ***
*** Grade Total *** 1 2,005 (kg)
*** Grand Total *** 1 2,005 (kg)

=== Last Item ===

CWBO QA/QC ☐ ACCEPTED ☑ REVIEWED ☐ WITNESSED Date / Signature: Aug. 04, 2022. CHANGWON BENDING QA/QC

M S KIM 2022 .08. 08 OBO R.M.G.

☐ WITNESSED ☑ REVIEWED

PM PIPING SCOTT (KL) LEE -W -R 2022 -08- 08

obo Intersica ☑ Review ☐ Witness C.Y.CHO 2022 -08- 08

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A。(Rectangular), YP Method : 0.2 % off-set
* Z-Direction Tensile Test (TTT or TTP) - Dia : 6 ㎜
* Impact Test. Direction : Surface Transversal, Full-Size : 10 ㎜X10 ㎜
* Strain Ageing Impact Test. Direction : Surface Transversal, Full-Size : 10 ㎜X10 ㎜, SF(Shear Fracture), Ageing Temperature : 250 °C, Ageing Time : 60 min., Strain : 6.3 %
* Division - L : Ladle Analysis, P : Products Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
We hereby certify that the material herein has been made in accordance with the order and above specification.
Thickness conforms to EN 10029 Class B.
Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

Surveyor To : ABS(CONSULTING)

T.C.BAE

posco

Mill Test Certificate/검사증명서

AR-FEN-00-RM03-300012

Certificate No./증명서번호 : 220802-FP01PI-0080A4-0001
Date of Issue/발행일자 : Aug., 02, 2022

Order No./계약번호 : 01S5546935
PO No./주문번호 : PENIX PJT 7.2.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Product No. /제품번호	Division	Cr (%)	Ni (%)	As (%)	B (ppm)	Bi (%)	Ca (ppm)	Cu (%)	H (ppm)	Mo (%)	N (ppm)	Nb (%)	Pb (%)	Sb (%)	Sn (%)	Ti (%)	V (%)	Sol-Al (%)	Total-Al (%)	CEQ (%)	PCM (%)
PB72311701	L	0.026	0.380	0.002	1	0.000	5	0.170	1.3	0.004	28	0.013	0.0000	0.001	0.001	0.0136	0.002	0.034	0.035	0.39	0.18
	P	0.024	0.380		1			0.163		0.002	29	0.013				0.0144	0.002		0.035	0.38	0.18

*** Sub Total (050) *** 1 2,005 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5
PCM (B) = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + 5*B

*** Grade Total *** 1 2,005 (kg)
*** Grand Total *** 1 2,005 (kg)

=== Last Item ===

CWDO QA/QC
[ ] ACCEPTED
[V] REVIEWED
[ ] WITNESSED
Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

M S KIM
2022 .08. 08
OBO R.M.G.

OWITNESSED
OREVIEWED

PM PIPING
SCOTT (KL) LEE
-W -P
2022 -08- 08

obo Intersica
☐ Review
☐ Witness
C.Y.CHO
2022 -08- 08

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
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Flatness according to class S of EN 10029.
Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

본 검사증명서 위.변조시 사문서 위조28형법 제231조29로 불이익을 당할 수 있으며, 본 증서는 KOLAS와 관련이 없습니다.
This Certificate is a (printed) copy of the original electronic document.

Surveyor To : ABS(CONSULTING)

T.C.BAE

posco

Ultrasonic Test Report
초음파탐상시험성적서

Certificate No./증명서번호 : 220802-FP01PI-0080A4-0001
Date of Issue/발행일자 : Aug., 02, 2022
AR-FEN-00-RM03-300012

Order No./계약번호 : 01S5546935
PO No./주문번호 : PENIX PJT 7.2.0

Supplier /주문자 : CHANGWON BENDING CO., LTD.
Commodity /품명 : PLATE

Customer /고객사 : CHANGWON BENDING CO., LTD.
Spec & Type /규격 : TOTAL EP STR 201 S420KT-40 Z35

Product No. /제품번호	Ultrasonic Test						Remarks
	Examination Method	Apparatus	Transducer	Frequency (MHz)	Sensitivity	Test Result	
PB72311701	2	1	1	5	H	1	1. Application Spec. : EN10160(1999) S3/E4
*** Sub Total (050) ***		1	2,005 (kg)				2. We hereby certity that the material described herein has been examined in accordance with above ultrasonic specification and fully conformed thereto.
*** Grade Total ***		1	2,005 (kg)				
*** Grand Total ***		1	2,005 (kg)				
			=== Last Item ===				

CWBD QA/QC
☑ ACCEPTED
☑ REVIEWED
☐ WITNESSED
Date / Signature:
Aug. 05, 2022.
CHANGWON BENDING CO., LTD. QA/QC

M S KIM
2022 .08. 08
OBO R.M.G.

☑ WITNESSED
☑ REVIEWED

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 08

obo Intersica
☑ Review
☐ Witness
C.Y.CHO
2022 -08- 08

* Couplant : Water
* Examination method(1:Direct straight Beam, 2:Direct double beam, 3:Others)
* Apparatus(1 : Digital Flaw Detector, 2: Others)
* Transducer(1: ¢ 20 ㎜, 2: ¢ 24 ㎜, 3: ¢ 25 ㎜ or 25 ㎜ square, 4: ¢ 30 ㎜, 5:8~12.5 ㎜, 9:others)
* Sensitivity(A:RB-D-1_0=50 %+10DB, B:STB-N_1=50 %, C:STB-N_1=70 %, D:STB-G.$V_{1.5\text{-}4.0}$=50 %, E:STB-G.$V_{1.5\text{-}4.0}$=80 %, F:STB-G.$V_{1.5\text{-}2.8}$=50 %, G:BG=75±5 %, H: ¢ 5.0 ㎜DAC, I: ¢ 11.0 ㎜DAC, J: ¢ 8.0 ㎜DAC, K:GB-T2970 Sensitivity, L:B_G=100 %, M: ¢ 3.0 ㎜FBH=60 %, N:Soviet 75ATM Sens., O:BS5996-93 Sens, P: ¢ 6.0 ㎜DAC, X:Others)
* Test Result (1: Good, 2: Acceptable)

This material has been fully killed and made by basic oxygen process. This material is fine grained steel.
This material has been made by vacuum degassing and calcium treated process.
No repair welding was performed to the products. Test Certificate is issued according to ISO 10474/EN 10204 3.2.
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Surface condition conforms to EN 10163-2 Class B Sub-Class 3.

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This Certificate is a (printed) copy of the original electronic document.

Surveyor To : ABS (CONSULTING)

T.C.BAE

CWBD
CHANG WON BENDING CO.,LTD

LONGITUDINAL WELDING STATUS LOG

End User / Client	TOTAL AUSTRAL / PM PIPING	Document No.	CW-LWSL-FENIX-S-001
Progect Name / No.	FENIX Phase 1 Development Project	Rev. No.	0
Description of Products	SAWL Carbon Steel Welded Tubulars and Cans	Data	03 Aug. 2022
Manufacture Specification	API 2B, AR-FEN-00DOEC-364003(R01), AR-FEN-00DOEC-364004(R01), GS EP STR 201(R15) & 301(R17)	Page No.	1 / 1

No.	Identication No.	Material Grade	Item No.	Category	DG	Plate No.	Heat No.	WPS	Tack Welding			L-Seam Inside Welding					L-Seam Outside Welding						NDT Date & Time 1)				NDT Report No. (KNDE-KH-CW-SL-22-FEN-)			
									Finish Date	Tack Welder	Wire Lot No.	MC No.	Finish Date	SAW Welder	SAW Wire Lot No.	SAW Flux Lot No.	MC No.	Finish Date	Finish Time	SAW Welder	SAW Wire Lot No.	SAW Flux Lot No.	VT	UT	DC UT 2)	MT	VT	UT	DC UT 2)	MT
1	CW-WPQ-001	S420 KT-40	314	Special	T	PB70950403	SF56695	122	27 Jul	W-8	21B610417	2	28 Jul	W-43	22SF51704	KE22062S	1	28 Jul	11:20	W-45	22SF51704	KE22062S	31 Jul 11:30	31 Jul 14:20	01 Aug 9:40	31 Jul 15:30	V-001	U-001-1	U-001-2	M-001
2	CW-WPQ-002	S420 KT-40 Z35	315	Special	T	PB72311701	SF56697	122	27 Jul	W-8	21B610417	2	28 Jul	W-43	22SF51704	KE22062S	1	28 Jul	18:10	W-45	22SF51704	KE22062S	31 Jul 11:20	31 Jul 13:30	01 Aug 9:30	31 Jul 14:20	V-001	U-001-1	U-001-2	M-001
3	CW-WPQ-003	S420 KT-40 Z35	316	Special	T	PB71625902	SB51709	122	27 Jul	W-8	21B610417	2	28 Jul	W-43	22SF51704	KE22062S	1	28 Jul	10:35	W-45	22SF51704	KE22062S	31 Jul 10:50	31 Jul 11:30	01 Aug 9:10	31 Jul 12:30	V-002	U-002-1	U-002-2	M-001

~ B L A N K ~

M S KIM
2022 .08. 03
OBO R.M.G.

WITNESSED
REVIEWED

[Abbrevition] *DG : Designation *C : Can *T : Tubular *MC No. : Machine Number *DC UT : Double Check UT

WPS	122
WPS No.	CW-SA-122 (Rev.2)
GMAW	KISWEL / KC-28
FCAW	-
SAW (Wire)	KISWEL / KD-50
SAW (Flux)	KISWEL / EF-200LT

Remark

1) For NDT, "Time" means the time when NDT is starting.

2) Extremities of logitudinal welds(over 200㎜) be double checked by another UT operator.

Prepared by Q.A

PM PIPING
SCOTT (KL) LEE
2022 -08- 03

PM

RM

obo Intersica
□ Review
□ Witness
C.Y. CHO
2022 .08. 03

TOTAL

ABS CONSULTING 15706 KSW CW1
03 Aug. 2022

TPI (3.2)

REPORT OF VISUAL EXAMINATION
육안검사보고서

케이엔디이주식회사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 명지동 3214-18번지
TEL . (051)271-4340 FAX . (051)271-4350

Report No.보고서 번호: KNDE-KH-CW-SL-22-FEN-V-001

Page No.페이지 번호: 1 of 1

Customer(발주처)		Project No./Name(공사번호/명)	
TOTAL AUSTRAL / PM PIPING		FENIX Phase 1 Development Project	
Item No./Name(제품번호/명)		Part No./Name(부품번호/명)	Dwg No.(도면번호)
SAWL Carbon Steel Welded Tubulars and Cans		N/A	N/A
Examination Time(검사시기)	Procedure No.(Rev.No)	Acceptance criteria(합격 기준)	
48Hr After Welding	KNDE-NDEP-VT-CWBD-FEN01 Rev.1 (AR-FEN-00-RM03-300007 Rev.0) CWBD QA.	8.0 ACCEPTANCE STANDARDS	
Measurement Equipment(측정 장비)		Weld Joint Type (용접형상)	Surface condition (표면상태) ■ As Ground
Welding Gauge : KNDE-KH-WG-V001 due date :2022.08.08		Double V	■ As Welded □As Casting □As Machined □ As R/M
Light Equipment(조명)		Lux Meter(조도계)	Illumination(조도):
■ Natural Light(자연광) ■ Other (Flashlight)		S/N :200700781 Due date : 2022.08.26	Actual 1150 Lux
Heat Treatment(열처리)	Material(재질)	Mat'l Dimensions (ODxTxL) [㎜]	Welding Process(용접 방법)
□ YES ■ NO	S420KT-40 & S420KT-40 Z35	See the below	GMAW + SAW
Exam Method(검사방법)		Test surface temperature (표면온도)	Visual Aids(보조장비)
■ Direct □ Remote □ Transiucemt		25 ℃	LED Flashlight

*Testing Extent (적용 범위): IN,Outside 100% of longitudinal welding

Place of Examination (검사장소) : CWBD Saengrim Factory

Remark(비고)

Identification No (확 인 번 호)	Mat'l Dimensions (ODxTxL) [㎜]			Accept/ Reject (합/부)	Defect(결함) Type (종류)	Location (위치)	Length/ Diameter mm (길이,직경)	Width/ Depth mm (폭,깊이)	Material Dimension Check (치수 확인)	Interpretation (판 정)	Date	Time
CW-WPQ-001	610	20	2,300	Acc						No Recordable indication	7/31	11:30
CW-WPQ-002	508	20	3,450	Acc						No Recordable indication	7/31	11:20
										BLANK		

□ ACCEPTED ☑ REVIEWED □ WITNESSED
CWBD QA/QC
Date / Signature
Aug. 02. 2022.
CHANGWON BINGING CO. LTD. QA/QC

PM PIPING
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OBO R.M.G.

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obo Intersica
□Review
□Witness
C.Y.CHO
2022 -08- 0 3

KSS CONSULTING 15706 MR. PARK
03 Aug. 2022

Examined by 검 사 자: 정 명 훈 M. H, JUNG — Level II
ISO9712 CERT NO 8197-CERT-NDT-0035-20

Approved by 승 인 자: 조 관 일 G. I, CHE — Level III
ISO9712 CERT NO 11234-2021-00

Date of Examination 검사일자 : 2022-07-31
Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
□ Witnessed by
□ Reviewed by

□ Third Party Inspector 공인 검사관
□ ANI/AI(Authorized Nuclear Inspector/Authorized Inspector)

REPORT OF VISUAL EXAMINATION
육안검사보고서

케이엔디이주식회사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 명지동 3214-18번지
TEL . (051)271-4340 FAX . (051)271-4350

Report No.보고서 번호: KNDE-KH-CW-SL-22-FEN-V-002

Page No.페이지 번호: 1 of 1

Customer(발주처)		Project No./Name(공사번호/명)	
TOTAL AUSTRAL / PM PIPING		FENIX Phase 1 Development Project	
Item No./Name(제품번호/명)		Part No./Name(부품번호/명)	Dwg No.(도면번호)
SAWL Carbon Steel Welded Tubulars and Cans		N/A	N/A
Examination Time(검사시기)	Procedure No.(Rev.No)	Acceptance criteria(합격 기준)	
48Hr After Welding	KNDE-NDEP-VT-CWBD-FEN01 Rev.1 (AR-FEN-00-RM03-300007 Rev.1) CWBD QA	8.0 ACCEPTANCE STANDARDS	
Measurement Equipment(측정 장비)		Weld Joint Type (용접형상)	Surface condition (표면상태) ■ As Ground
Welding Gauge : KNDE-KH-WG-V001 due date :2022.08.08		Double V	■ As Welded □As Casting □As Machined □ As R/M
Light Equipment(조명)		Lux Meter(조도계)	Illumination(조도):
■ Natural Light(자연광) ■ Other (Flashlight)		S/N :200700781 Due date : 2022.08.26	Actual 1150 Lux
Heat Treatment(열처리)	Material(재질)	Mat'l Dimensions (ODxTxL) [㎜]	Welding Process(용접 방법)
□ YES ■ NO	S420KT-40 Z35	See the below	GMAW + SAW
Exam Method(검사방법)		Test surface temperature (표면온도)	Visual Aids(보조장비)
■ Direct □ Remote □ Transiucemt		25 ℃	LED Flashlight

*Testing Extent (적용 범위): IN,Outside 100% of longitudinal welding

Place of Examination (검사장소) : CWBD Saengrim Factory

Remark(비고)

Identification No (확 인 번 호)	Mat'l Dimensions (ODxTxL) [㎜]			Accept/ Reject (합/부)	Defect(결함) Type (종류)	Location (위치)	Length/ Diameter mm (길이,직경)	Width/ Depth mm (폭,깊이)	Material Dimension Check (치수 확인)	Interpretation (판 정)	Date	Time
CW-WPQ-003	914	50	3,450	Acc						No Recordable indication	7/31	10:50
										BLANK		

CWBD QA/QC □ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: Aug. 02 2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

ABS CONSULTING 15706 SW PWHT
03 AUG 2022

M S KIM
2022 .08. 03
OBO R.M.G.

OWITNESSED
OREVIEWED

obo Intersica
□Review
□Witness
C.Y.CHO
2022 -08- 03

Examined by 검 사 자: 정 명 훈 M. H, JUNG — Level II
ISO9712 CERT NO 3197-CERT-NDT-0035-20

Approved by 승 인 자: 조 관 일 G. I, CHE — Level III
ISO9712 CERT NO 11234-2021-00

Date of Examination 검사일자 : 2022-07-31
Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
□ Witnessed by
□ Reviewed by

□ Third Party Inspector 공인 검사관
□ ANI/AI(Authorized Nuclear Inspector/Authorized Inspector)

REPORT OF ULTRASONIC EXAMINATION

초 음 파 탐 상 검 사 보 고 서

DNV Approved No: AOSS0000H8E

케 이 엔 디 이 주 식 회 사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길26번길 9 (명지동)
TEL . (051)271-4340 FAX . (051)271-4350

Report No. 보고서 번호: KNDE-KH-CW-SL-22-FEN-U-001-1

Page No. 페이지 번호: 1 of 1

Customer(발주처)	Project No./Name(공사번호/명)	
TOTAL AUSTRAL / PM PIPING	FENIX Phase 1 Development Project	
Item No./Name(제품번호/명)	Part No./Name(부품번호/명)	Dwg No.(Rev) (도면번호)
SAWL Carbon Steel Welded Tubulars and Cans	N/A	N/A

TRV(ITP) No.	Rev	Operation No.	Procedure No.(Rev)(절차서)	Acceptance criteria (합격기준)
N/A			KNDE-NDEP-UT-CWBD-FEN01 Rev.3 (AR-FEN-00-RM03-300006 Rev.0) CWBD QA Team	EN ISO 11666 Level 2

Examination Time(검사시기)	Heat Treatment (열처리)	Surface Condition (표면상태):	
48Hr After Welding	☐ YES ■ NO	■ As Ground ☐ As Machined ☐ As Casted ☐ As Forged	☐ As Rolled ■ As Welded
Product Type (제품형태)	Mat'l Dimensions (지름/길이)	Weld Process (용접방법)	Weld Fusion Type (용입형상)
PIPE	See the below	GMAW+ SAW	■ F.P ☐ P.P
Material Type(재질)	Mat'l Tickness (두께)	Weld Joint Type (용접형상)	Weld Groove Type (개선형상)
S420KT-40 & S420KT-40 Z35	See the below	■Butt ☐ T ☐ K ☐ Y	Double V
Test Temp (표면온도)	Surface Roughness (표면거칠기)	Couplant(접촉매질)	
25 °C	N/A Ra / Rz	☐ Oil ☐ Glycerin ■ C.M.C ☐ Grease ☐ Other	

Cable (케이블)	Testing Level (탐상 레벨)	Number of Scans (탐상 횟수)		Using Probe (사용 탐촉자)	Scanning Beams (탐상 거리)
RG-174 2m	☐ A ■ B ☐ C ☐ D	20	■ Scan from One side of weld ☐ Scan from Both sides of weld	■ 0° ■ 45° ■ 60° ■ 70° ☐Other	1.25 Skip

Test Method(검사방법) ■ Contact(접촉) ☐ Immerion(수침)
Contact wedge : Shoes

			Probe (탐촉자)	Serial No. (고유번호)	Angle (교정 각도)	Frequency (주 파 주)	Size (크 기)
Calibration Block (교정 시험편)	Type(종류)	S/No.(번호)	SEB 4 E	57470-5419	0°	4MHZ	6 x 20
Standard Block	IIW-V1	A18624	MWB 70-4E	56929-89593	70°	4MHZ	8 X 9
Reference Block	R/B(T40) SDH Ø3 T	PB71789502	MWB 60-4E	56928-80937	60°	4MHZ	8 X 9
			MWB 45-4E	56927-83853	45°	4MHZ	8 X 9

Equipment (탐 상 기)			Setting Sensitivity Method (감도설정법)	Method (방법)	Standard (표준감도)	T/C Data (전이보상)	Scanning (주사감도)
	S/No. (번호)	GOPLS19070215		3ø SDH DAC Method Back Method	DAC100% B2 80%	+0dB +0dB +0dB	+14dB
	Type/Model (종류/모델)	USM GO+					
	Maker (제조사)	GE					
	Cal,Due Date (교정일,만료일)	2022-07-10 ~ 2022-10-09		Evaluation Level (평가레벨):	-14dB	Acceptance Level (합격레벨):	ISO 11666 Figure A1

Identification No. (확 인 번 호)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Acc. (합격)	Rej. (불합격)	Grade (등급)	Location [mm]	Length [mm]	Depth [mm]	Max. Resp. (DAC%)	Interpretation 판 정	Date	Time
CW-WPQ-001	610	20	2,300	V							No Recordable indication	7/31	14:20
CW-WPQ-002	508	20	3,450	V							No Recordable indication	7/31	13:30

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03

OWITNESSED
OREVIEWED

obo Intersica
☐ Review
☐ Witness
C.Y.CHO

OBO R.M.G.

*Testing Extent (적용 범위) : Outside 100% of longitudinal welding

Examined by 시 험 자: 하 정 환 J-H .HA — ISO9712 CERT NO. 402897 — Level 레 벨 II ISO9712

CW5004-00 ■ REVIEWED ☐ WITNESSED
Date / Signature: Aug. 02. 2022

Approved by 승 인 자: 조 관 일 G-I .CHE — ISO9712 CERT NO. [illegible] — Level 레 벨 III ISO9712

Date of Examination 검사일자: 2022-07-31 2022 -08- 03
Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐ Third Party Inspector 공인 검사관
☐ ANI/AI (Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING 15706 BR

03 Aug. 2022

2151/ 3402

REPORT OF ULTRASONIC EXAMINATION

초 음 파 탐 상 검 사 보 고 서

DNV Approved No: AOSS0000H8E

케 이 엔 디 이 주 식 회 사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길26번길 9 (명지동)
TEL . (051)271-4340 FAX . (051)271-4350

Report No. 보고서 번호	Page No. 페이지 번호
KNDE-KH-CW-SL-22-FEN-U-001-2	1 of 1

Customer(발주처)	Project No./Name(공사번호/명)	
TOTAL AUSTRAL / PM PIPING	FENIX Phase 1 Development Project	
Item No./Name(제품번호/명)	Part No./Name(부품번호/명)	Dwg No.(Rev) (도면번호)
SAWL Carbon Steel Welded Tubulars and Cans	N/A	N/A

TRV(ITP) No.	Rev	Operation No.	Procedure No.(Rev)(절차서)	Acceptance criteria (합격기준)
N/A			KNDE-NDEP-UT-CWBD-FEN01 Rev.3 (AR-FEN-00-RM03-300006 Rev.0 CWBD QA)	EN ISO 11666 Level 2

Examination Time(검사시기)	Heat Treatment (열처리)	Surface Condition (표면상태):	
48Hr After Welding	☐ YES ■ NO	■ As Ground ☐ As Machined ☐ As Casted ☐ As Forged	☐ As Rolled ■ As Welded
Product Type (제품형태)	Mat'l Dimensions (지름/길이)	Weld Process (용접방법)	Weld Fusion Type (용입형상)
PIPE	See the below	GMAW+ SAW	■ F.P ☐ P.P
Material Type(재질)	Mat'l Tickness (두께)	Weld Joint Type (용접형상)	Weld Groove Type (개선형상)
S420KT-40 & S420KT-40 Z35	See the below	■Butt ☐ T ☐ K ☐ Y	Double V
Test Temp (표면온도)	Surface Roughness (표면거칠기)	Couplant(접촉매질)	
25 °C	N/A Ra / Rz	☐ Oil ☐ Glycerin ■ C.M.C ☐ Grease ☐ Other	

Cable (케이블)	Testing Level (탐상 레벨)	Number of Scans (탐상 횟수)		Using Probe (사용 탐촉자)	Scanning Beams (탐상 거리)
RG-174 2m	☐ A ■ B ☐ C ☐ D	14	■ Scan from One side of weld ☐ Scan from Both sides of weld	■ 0° ■ 45° ■ 60° ☐ 70° ☐ Other	1.5 Skip

Test Method(검사방법) ■ Contact(접촉) ☐ Immerion(수침)
Contact wedge : Shoes

	Probe (탐촉자)	Serial No. (고유번호)	Angle (교정 각도)	Frequency (주 파 주)	Size (크 기)
SEB 4 E		57470-5419	0°	4MHZ	6 x 20
MWB 70-4E		56919-88480	70°	4MHZ	8 X 9
MWB 60-4E		56926-81672	60°	4MHZ	8 X 9
MWB 45-4E		56928-83852	45°	4MHZ	8 X 9

Calibration Block (교정 시험편)	Type(종류)	S/No.(번호)
Standard Block	IIW-V1	A18624
Reference Block	R/B(T40) SDH Ø3 T	PB71789502

Equipment (탐 상 기)			Setting Sensitivity Method (감도설정법)	Method (방법)	Standard (표준감도)	T/C Data (전이보상)	Scanning (주사감도)
	S/No. (번호)	12105424		3ø SDH DAC Method Back Method	DAC100% B2 80%	+ 4dB + 3dB + 2dB	+ 14dB
	Type/Model (종류/모델)	USM GO+					
	Maker (제조사)	GE					
	Cal,Due Date (교정일,만료일)	2022-07-10 ~ 2022-10-09		Evaluation Level (평가레벨):	-14dB	Acceptance Level (합격레벨):	ISO 11666 Figure A1

Identification No. (확 인 번 호)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Acc. (합격)	Rej. (불합격)	Grade (등급)	Location [mm]	Length [mm]	Depth [mm]	Max. Resp. (DAC%)	Interpretation 판 정	Date	Time
CW-WPQ-001	610	20	2,300	V		PM PIPING					No Recordable indication	8/1	9:40
CW-WPQ-002	508	20	3,450	V		SCOTT (KL) LEE -W -R					No Recordable indication	8/1	9:30
						2022-08-03		M S KIM 2022.08.03			BLANK ~		

*Testing Extent (적용 범위) : Outside over 200mm each end

OBO R.M.G.

OWITNESSED
OREVIEWED

obo Intersica
☐ Review
☐ Witness
C.Y.Cho
2022-08-03

Examined by 시 험 자: 김 승 현 S-H. KIM — Level II — ISO9712 CERT NO. 40[illegible]
CWBD QA/QC ☐ REVIEWED ☐ WITNESSED Date / Signature: Aug. 03. 2022

Approved by 승 인 자: G-I. CHE — Level III — ISO9712 CERT NO. 41234-2021-00 (DONG-IL TECHNOLOGY CO., LTD.) 레 벨 — ISO9712

Date of Examination 검사일자: 2022-08-01
Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐ Third Party Inspector 공인 검사관
☐ ANI/AI (Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING 15706 KR Lloyd's Register

03 Aug. 2022

AR-FEN-00-RM03-300012

REPORT OF ULTRASONIC EXAMINATION

초 음 파 탐 상 검 사 보 고 서

DNV Approved No: AOSS0000H8E

케 이 엔 디 이 주 식 회 사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길26번길 9 (명지동)
TEL . (051)271-4340 FAX . (051)271-4350

Report No. 보고서 번호: KNDE-KH-CW-SL-22-FEN-U-002-1

Page No. 페이지 번호: 1 of 1

Customer(발주처)			Project No./Name(공사번호/명)		
TOTAL AUSTRAL / PM PIPING			FENIX Phase 1 Development Project		
Item No./Name(제품번호/명)			Part No./Name(부품번호/명)	Dwg No.(Rev) (도면번호)	
SAWL Carbon Steel Welded Tubulars and Cans			N/A	N/A	
TRV(ITP) No.	Rev	Operation No.	Procedure No.(Rev)(절차서)		Acceptance criteria (합격기준)
N/A			KNDE-NDEP-UT-CWBD-FEN01 Rev.3 (AR-FEN-00-RM03-300006 Rev.0) CWBD QA.		EN ISO 11666 Level 2
Examination Time(검사시기)	Heat Treatment (열처리)		Surface Condition (표면상태): ☐ As Rolled ■ As Welded		
48Hr After Welding	☐ YES ■ NO		■ As Ground ☐ As Machined ☐ As Casted ☐ As Forged		
Product Type (제품형태)	Mat'l Dimensions (지름/길이)		Weld Process (용접방법)	Weld Fusion Type (용입형상)	
PIPE	See the below		GMAW+ SAW	■ F.P ☐ P.P	
Material Type(재질)	Mat'l Tickness (두께)		Weld Joint Type (용접형상)	Weld Groove Type (개선형상)	
S420KT-40 Z35	See the below		■Butt ☐ T ☐ K ☐ Y	Double V	
Test Temp (표면온도)	Surface Roughness (표면거칠기)		Couplant(접촉매질)		
25 °C	N/A Ra / Rz		☐ Oil ☐ Glycerin ■ C.M.C ☐ Grease ☐ Other		

Cable (케이블)	Testing Level (탐상 레벨)	Number of Scans (탐상 횟수)		Using Probe (사용 탐촉자)	Scanning Beams (탐상 거리)
RG-174 2m	☐ A ■ B ☐ C ☐ D	14	■ Scan from One side of weld ☐ Scan from Both sides of weld	■ 0° ■ 45° ■ 60° ☐ 70° ☐Other	1.25 Skip

Test Method(검사방법) ■ Contact(접촉) ☐ Immerion(수침)
Contact wedge : Shoes

	Probe (탐촉자)	Serial No. (고유번호)	Angle (교정 각도)	Frequency (주 파 주)	Size (크 기)
Calibration Block (교정 시험편) Type(종류)	SEB 4 E	57467-01929	0°	4MHZ	6 x 20
Standard Block: IIW-V1	4C14X14A60	AEUC101	60°	4MHZ	14 x 14
Reference Block: R/B(T40) SDH Ø3 T	4C14X14A45	AEUC99	45°	4MHZ	14 x 14

Equipment (탐 상 기)			Setting Sensitivity Method (감도설정법)	Method (방법)	Standard (표준감도)	T/C Data (전이보상)	Scanning (주사감도)
S/No. (번호)	GOPLS19070215		3ø SDH DAC Method Back Method	DAC100% B2 80%	+0dB +0dB +0dB	+14dB	
Type/Model (종류/모델)	USM GO+						
Maker (제조사)	GE		Evaluation Level (평가레벨):	-14dB	Acceptance Level (합격레벨):	ISO 11666 Figure A1	
Cal,Due Date (교정일,만료일)	2022-07-10 ~ 2022-10-09						

Identification No. (확 인 번 호)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Acc. (합격)	Rej. (불합격)	Grade (등급)	Location [mm]	Length [mm]	Depth [mm]	Max. Resp. (DAC%)	Interpretation 판 정	Date	Time
CW-WPQ-003	914	50	3,450	V		PM PIPING					No Recordable indication	7/31	11:30
						SCOTT (KL) LEE -W -R 2022 -08- 0 3					~ BLANK ~		

CWBD QA/QC ☐ ACCEPTED ☐ REVIEWED ☐ WITNESSED Date / Signature: 03-08-2022 CHANGWON BRANCH

M S KIM 2022.08.03 OBO R.M.G.

OWITNESSED OREVIEWED

obo Intersica ☐ Review ☐ Witness C.Y.CHO 2022-08-03

*Testing Extent (적용 범위) : Outside 100% of longitudinal welding

Examined by 시 험 자: 하 정 환 J-H .HA ISO9712 CERT NO. 402897 Level 레벨 II ISO9712

Approved by 승 인 자: 조 관 일 G-I .CHE ISO9712 CERT NO. 11284-2021-00 Level 레벨 III ISO9712

Date of Examination 검사일자: 2022-07-31

Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐ Third Party Inspector 공인 검사관
☐ ANI/AI (Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING 15706 MT PT UT RT ET VT PT

03 Aug. 2022

REPORT OF ULTRASONIC EXAMINATION

초 음 파 탐 상 검 사 보 고 서

DNV Approved No: AOSS0000H8E

케 이 엔 디 이 주 식 회 사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길26번길 9 (명지동)
TEL . (051)271-4340 FAX . (051)271-4350

Report No. 보고서 번호: KNDE-KH-CW-SL-22-FEN-U-002-2

Page No. 페이지 번호: 1 of 1

Customer(발주처): TOTAL AUSTRAL / PM PIPING			Project No./Name(공사번호/명): FENIX Phase 1 Development Project	
Item No./Name(제품번호/명): SAWL Carbon Steel Welded Tubulars and Cans			Part No./Name(부품번호/명): N/A	Dwg No.(Rev) (도면번호): N/A
TRV(ITP) No.: N/A	Rev	Operation No.	Procedure No.(Rev)(절차서): KNDE-NDEP-UT-CWBD-FEN01 Rev.3 (AR-FEN-00-RM03-300006 Rev.0) CWBD QA	Acceptance criteria (합격기준): EN ISO 11666 Level 2
Examination Time(검사시기): 48Hr After Welding		Heat Treatment (열처리): ☐ YES ■ NO	Surface Condition (표면상태): ☐ As Rolled ■ As Welded ■ As Ground ☐ As Machined ☐ As Casted ☐ As Forged	
Product Type (제품형태): PIPE		Mat'l Dimensions (지름/길이): See the below	Weld Process (용접방법): GMAW+ SAW	Weld Fusion Type (용입형상): ■ F.P ☐ P.P
Material Type(재질): S420KT-40 Z35		Mat'l Tickness (두께): See the below	Weld Joint Type (용접형상): ■Butt ☐ T ☐ K ☐ Y	Weld Groove Type (개선형상): Double V
Test Temp (표면온도): 25 °C		Surface Roughness (표면거칠기): N/A Ra / Rz	Couplant(접촉매질): ☐ Oil ☐ Glycerin ■ C.M.C ☐ Grease ☐ Other	

Cable (케이블)	Testing Level (탐상 레벨)	Number of Scans (탐상 횟수)		Using Probe (사용 탐촉자)	Scanning Beams (탐상 거리)
RG-174 2m	☐ A ■ B ☐ C ☐ D	14	■ Scan from One side of weld ☐ Scan from Both sides of weld	■ 0° ■ 45° ■ 60° ☐ 70° ☐Other	1.5 Skip

Test Method(검사방법) ■ Contact(접촉) ☐ Immerion(수침)
Contact wedge : Shoes

	Probe (탐촉자)	Serial No. (고유번호)	Angle (교정 각도)	Frequency (주 파 주)	Size (크 기)
Calibration Block (교정 시험편) Type(종류) / S/No.(번호)					
Standard Block: IIW-V1 / A18624	SEB 4 E 4C14X14A60 4C14X14A45	57467-01929 AEUC98 AEUC96	0° 60° 45°	4MHZ 4MHZ 4MHZ	6 x 20 14 x 14 14 x 14
Reference Block: R/B(T40) SDH Ø3 T / PB71789502					

Equipment (탐 상 기)			Setting Sensitivity Method (감도설정법)	Method (방법)	Standard (표준감도)	T/C Data (전이보상)	Scanning (주사감도)
	S/No. (번호)	12105424					
	Type/Model (종류/모델)	USM GO+		3ø SDH DAC Method Back Method	DAC100% B2 80%	+ 4dB + 3dB + 2dB	+ 14dB
	Maker (제조사)	GE					
	Cal,Due Date (교정일,만료일)	2022-07-10 ~ 2022-10-09		Evaluation Level (평가레벨):	-14dB	Acceptance Level (합격레벨):	ISO 11666 Figure A1

Identification No. (확 인 번 호)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Acc. (합격)	Rej. (불합격)	Grade (등급)	Location [mm]	Length [mm]	Depth [mm]	Max. Resp. (DAC%)	Interpretation 판 정	Date	Time
CW-WPQ-003	914	50	3,450	V							No Recordable indication	8/1	9:10

CWBD QA/QC ☐ ACCEPTED ☐ REVIEWED ☐ WITNESSED Date / Signature: 04.02.2022.

PM PIPING
SCOTT (KL) LEE
-W -R
2022 -08- 03

M S KIM
2022 .08. 03

~ BLANK ~

OWITNESSED
OREVIEWED

obo Intersica
☐ Review
☐ Witness
C.Y.CHO

OBO R.M.G.

*Testing Extent (적용 범위) : Outside over 200mm each end

2022 -08- 03

Examined by 시 험 자: 김 승 현 S-H .KIM ISO9712 CERT NO. 40240 Level II ISO9712

Approved by 승 인 자: 조 관 일 G-I .CHE ISO9712 CERT NO. 11234-2021-00 Level III ISO9712

Date of Examination 검사일자: 2022-08-01
Place of Examination 검사장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐ Third Party Inspector 공인 검사관
☐ ANI/AI (Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING 15706 03 Aug. 2022

REPORT OF MAGNETIC PARTICLE EXAMINATION
자분탐상검사보고서

DNV Approved No : AOSS0000H8E

케이엔디이주식회사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길 26번길 9
TEL . (051)271-4340 FAX . (051)271-4350

Report No.보고서 번호: KNDE-KH-CW-SL-22-FEN-M-001

Page No.페이지 번호: 1 of 1

Customer (발주처)			Project No./Name (공사번호/명)		
TOTAL AUSTRAL / PM PIPING			FENIX Phase 1 Development Project		
TRV(ITP) No.	Rev	Operation No.	Part No./Name(부품번호/명)	Dwg.No(Rev) (도면번호)	
N/A			N/A	N/A	
Item No./Name(제품번호/명)		Procedure No.(Rev) (절차서)		Acceptance criteria (합격기준)	
SAWL Carbon Steel Welded Tubulars and Cans		KNDE-NDEP-MT-CWBD-FEN01 Rev.0 (AR-FEN-00-RM03-300004 Rev.0) CWBD QA		ISO 23278 Level 2X (Special Category)	

Material (재질)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]	Examination Time (검사시기)	Heat Treatment (열처리)	Weld Process (용접방법)	Weld Groove Type (개선형태)
S420KT-40 & S420KT-40 Z35	See the below	48Hr After Welding	☐ YES ■ NO	GMAW+ SAW	Double V

Surface condition(표면상태) : ■ As Ground ■ As Welded ☐ As Forged ☐ As Machined ☐ etc : (As) | Surface Roughness (표면거칠기) Ra/Rz: N/A

Light Equipment(조명장치) : ■ Natural Light(자연광) ■ Other(LED Lamp) ☐ Other(White bulb - AC, 220V, 100Watt, Nam Young)

Illumination(조도) : Actual 1250 Lux | Surface temperature(표면온도) : 25 ℃

Lux Meter,s/n,calibration (조도계,s/n,교정)	Thermometer,s/n, calibration (표면온도계, s/n, 교정)	Hall Effect Probe, s/n, calibration (홀 프로브, s/n, 교정)
S/N : 200700781 Due date : 2022.08.26	S/N : E0084035465 Due date : 2023.01.12	S/N : 366 Due date : 2023.05.15

Current(자화전류) : ■ AC ☐ DC ☐ HWDC ☐ FWDC (Amp) | Test Technique(검사 방법) : ■ Continuouse(연속법) ☐ Residual(잔류법)

Magnetization(자화방법) : ■Yoke ☐ Prod ☐Coil ☐Central Cond ☐ Clamp ☐ WrapCable ☐ Other

Lifting Block (시험편종류) : PLATE L/B S/N :MP19579 4.5 kg | Demagnetization (탈자) : ☐ YES ■ NO | Field Strength (자장강도) : 2 kA/m up to 6.5 kA/m

Field Direction Indicator (자장지시계) : ■Castrol Strip II ☐QQI KS-230 ☐Pie-Indicator ☐Other | UV Light Meter (강도계) s/n: N/A | Due Date (교정유효일): N/A

UV LAMP ☐ With (사용) ■ Without (사용무) (자외선등): | Maker (제조사): N/A | S/No. (고유번호): N/A | Intensity (강도): N/A ㎼/㎠ | Due Date (교정유효일): N/A

Equipment(탐 상 기)		Contrast Paint(자분대비 페인트)		Magnetic Particle (자 분)	
S/No. (고유번호)	NW6710	Maker(제조사) Lot.No(제조번호)	KYUNG-DO (Lot NO. 220304)	Maker(제조사) Lot.No(제조번호)	KYUNG-DO (Lot NO. 220120)
Maker (제조사)	NAWOO	Density (농도)	1.065	Settling Volume (농도/침전량)	2.0 ml / 100 ml
Type/Model (종류/모델)	A.C YOKE / MY-2	Type (종류)	Paint	Type (Method) (종류)	☐ Dry(건식) ■ Wet(습식)
Due Date (교정유효일)	2021.10.07 ~ 2022.10.06	Color (색상)	White (White Paint WMP-1)	Color (색상)	■ Non-Fluorescent (7C-Black) ☐ Fluorescent

Identification No. 확 인 번 호	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Accept 합격	Reject 불합격	Interpretation 판 정	Date	Time
CW-WPQ-001	610	20	2,300	V		No Recordable indication	7/31	15:30
CW-WPQ-002	508	20	3,450	V		No Recordable indication	7/31	14:20
				PM PIPING		~ BLANK ~		
				SCOTT (KL) LEE		M S KIM		
				-W	-R			
				2022 -08- 03		2022 .08. 03		

ACCEPTED / REVIEWED / WITNESSED / Date / Signature: Aug. 03. 2022 — CWBD WELDING CO.,LTD QA/QC

OWITNESSED OREVIEWED

obo Intersica ☐Review ☐Witness C.Y.CHO 2022 -08- 03

*Testing Extent (적용 범위): IN:Outside Min 200mm each end

OBO R.M.G.

Examined by 시 험 자: 강 동 훈 D-H .KANG ISO9712 CERT NO. 439741 — Level 레벨 II ISO9712

Approved by 승 인 자: 조 관 일 G-I .CHE ISO9712 CERT NO. 11234-2021-00 — Level 레벨 III ISO9712

Date of Examination 검사 일자: 2022-07-31

Place of Examination 검사 장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐Third Party Inspector 공인 검사관
☐ANI/AI(Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING NR 15706 SWPHT — 05 Aug. 2022

REPORT OF MAGNETIC PARTICLE EXAMINATION
자 분 탐 상 검 사 보 고 서

DNV Approved No : AOSS0000H8E

케 이 엔 디 이 주 식 회 사
Korea Non-Destructive Examination Co., Ltd
본 사 : 부산광역시 강서구 새진목길 26번길 9
TEL . (051)271-4340 FAX . (051)271-4350

Report No.보고서 번호: KNDE-KH-CW-SL-22-FEN-M-002

Page No.페이지 번호: 1 of 1

Customer (발주처)	Project No./Name (공사번호/명)	
TOTAL AUSTRAL / PM PIPING	FENIX Phase 1 Development Project	
TRV(ITP) No. Rev Operation No.	Part No./Name(부품번호/명)	Dwg.No(Rev) (도면번호)
N/A	N/A	N/A

Item No./Name(제품번호/명)	Procedure No.(Rev) (절차서)	Acceptance criteria (합격기준)
SAWL Carbon Steel Welded Tubulars and Cans	KNDE-NDEP-MT-CWBD-FEN01 Rev.0 (AR-FEN-00-RM03-300014 Rev.0) CWBD QA 승인	ISO 23278 Level 2X (Special Category)

Material (재질)	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]	Examination Time (검사시기)	Heat Treatment (열처리)	Weld Process (용접방법)	Weld Groove Type (개선형태)
S420KT-40 Z35	See the below	48Hr After Welding	☐ YES ■ NO	GMAW+ SAW	Double V

Surface condition(표면상태) : ■ As Ground ■ As Welded ☐ As Forged ☐ As Machined ☐ etc : (As) | Surface Roughness (표면거칠기) Ra/Rz: N/A

Light Equipment(조명장치) : ■ Natural Light(자연광) ■ Other(LED Lamp) ☐ Other(White bulb - AC, 220V, 100Watt, Nam Young)

Illumination(조도) : Actual 1250 Lux | Surface temperature(표면온도) : 25 ℃

Lux Meter,s/n,calibration (조도계,s/n,교정)	Thermometer,s/n, calibration (표면온도계, s/n, 교정)	Hall Effect Probe, s/n, calibration (홀 프로브, s/n, 교정)
S/N : 200700781 Due date : 2022.08.26	S/N : E0084035465 Due date : 2023.01.12	S/N : 366 Due date : 2023.05.15

Current(자화전류) : ■ AC ☐ DC ☐ HWDC ☐ FWDC (Amp) | Test Technique(검사 방법) : ■ Continuouse(연속법) ☐ Residual(잔류법)

Magnetization(자화방법) : ■Yoke ☐ Prod ☐Coil ☐Central Cond ☐ Clamp ☐ WrapCable ☐ Other

Lifting Block (시험편종류) : PLATE L/B S/N :MP19579 4.5 kg | Demagnetization (탈자) : ☐ YES ■ NO | Field Strength (자장강도) : 2 kA/m up to 6.5 kA/m

Field Direction Indicator (자장지시계) : ■Castrol Strip II ☐QQI KS-230 ☐Pie-Indicator ☐Other | UV Light Meter (강도계) s/n: N/A | Due Date (교정유효일): N/A

UV LAMP (자외선등): ☐ With (사용) ■ Without (사용무) | Maker (제조사): N/A | S/No. (고유번호): N/A | Intensity (강도): N/A ㎼/㎠ | Due Date (교정유효일): N/A

Equipment(탐 상 기)		Contrast Paint(자분대비 페인트)		Magnetic Particle (자 분)	
S/No. (고유번호)	NW6710	Maker(제조사) Lot.No(제조번호)	KYUNG-DO (Lot NO. 220304)	Maker(제조사) Lot.No(제조번호)	KYUNG-DO (Lot NO. 220120)
Maker (제조사)	NAWOO	Density (농도)	1.065	Settling Volume (농도/침전량)	2.0 ml / 100 ml
Type/Model (종류/모델)	A.C YOKE / MY-2	Type (종류)	Paint	Type (Method) (종류)	☐ Dry(건식) ■ Wet(습식)
Due Date (교정유효일)	2021.10.07 ~ 2022.10.06	Color (색상)	White (White Paint WMP-1)	Color (색상)	■ Non-Fluorescent (7C-Black) ☐ Fluorescent

Identification No. 확 인 번 호	Mat'l Dimensions (ODxTxL) (지름x두께x길이) [㎜]			Accept 합격	Reject 불합격	Interpretation 판 정	Date	Time
CW-WPQ-003	914	50	3,450	V		No Recordable indication	7/31	12:30
						~ BLANK ~		

☐ ACCEPTED ■ REVIEWED ☐ WITNESSED
CWBD QA/QC
Date / Signature: 22.08.2022
CHANGWON BENDING CO., LTD. QA/QC

PM PIPING
SCOTT (KL) LEE
-W -R
2022-08-03

M S KIM
2022.08.03

OWITNESSED
OREVIEWED

obo Intersica
☐ Review
☐ Witness
C.Y.CHO

*Testing Extent (적용 범위): IN,Outside Min 200mm each end

OBO R.M.G.
2022-08-03

Examined by 시 험 자: 강 동 훈 D-H .KANG ISO9712 CERT NO. 439741 — Level 레벨 II ISO9712

Approved by 승 인 자: 조 관 일 G-I .CHE ISO9712 CERT NO. 11234-2021-00 — Level 레벨 III ISO9712

Date of Examination 검사 일자: 2022-07-31

Place of Examination 검사 장소: CWBD Saenglim Factory

Owner/Customer 주문주/고객 감독관
☐ Witnessed by
☐ Reviewed by

☐Third Party Inspector 공인 검사관

☐ANI/AI(Authorized Nuclear Inspector/Authorized Inspector)

ABS CONSULTING 15706

CHANG WON BENDING CO.,LTD

DIMENSIONAL and VISUAL INSPECTION REPORT

Document No.	CW-DV-FENIX-S-001
Reversion No.	0
Date	03 Aug. 2022
Page No.	1 / 1

End User / Client : TOTAL AUSTRAL / PM PIPING

Project Name : FENIX Phase 1 Development Project

P.O. No.(TOTAL / RM / PM) : 1722000931 / 112A10A / 5279-22

Description of Products : SAWL Carbon Steel Welded Tubulars and Cans

Manufacture Specification : API 2B, AR-FEN-00DOEC-364003(R01), AR-FEN-00DOEC-364004(R01), GS EP STR 201(R15) & GS EP STR 301(R17)

Dimensional Procedure : AR-FEN-00-RM03-300009 (Rev.0) [CW-TOTAL-DI-01 (Rev.2)]

No.	Identication No.	OD	T	L	Material	Item No.	Category	DG	Plate No.	Heat No.	PCS
1	22-WPQ-001	610.0	20.00	2,300	S420 KT-40	314	Special	T	PB70950403	SF56695	1
2	22-WPQ-002	508.0	20.00	3,450	S420 KT-40 Z35	315	Special	T	PB72311701	SF56697	1
3	22-WPQ-003	914.0	50.00	3,450	S420 KT-40 Z35	316	Special	T	PB71625902	SB51709	1

~ B L A N K ~

* Reference

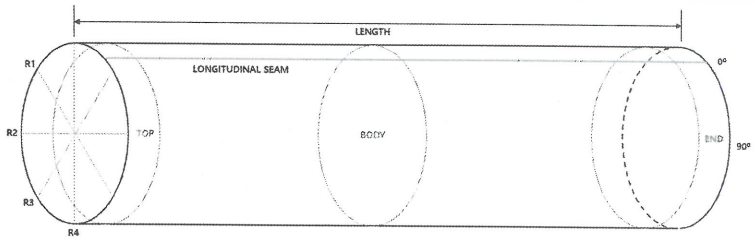
Identication No.	Item No.	MTO Item
22-WPQ-001	314	WPQ.D02 - Deck
22-WPQ-002	315	WPQ.J01 - Jacket
22-WPQ-003	316	WPQ.J02 - Jacket

Remark

* Unit : Millimeter [mm]

* Can : Inside and outside weld reinforcements shall be ground flush for a minimum distance of 100㎜ from each end.

* Tubular : Only inside wled reinforcements shall be ground flush for any other tubulars.



*Roundness Check 4 Point : Record Min / Max

[Abbrevition] *OD : Out of Diameter *T : Wall Thickness *L : Entire Pipe Length *DG : Designation *C : Can *T : Tubular *STD : Standard *DV : Deviation *ACT : Actual *ACC : Acceptable *SC : Square Cut *NA : Not Applicable *DWG : Drawings

Inspection Item			Diameter				Out of Roundness									Thickness			Length		Weld Bead Height		Radial Offset	Straightness		Pipe Ends		Root Face		Squareness		DG	Visual
Equipment Serial No.			L10122402				L12122401									03828257			SS-014		L13122301		L13122301	SS-010		A18092102		SS-010		SS-010			
Tolerance			Ends Max ±1.6 Body 0.5% of OD or Max ±4.0				T≤50.8:Max 1% of OD or Max 6.3, 50.8 < T:Max T/8, 1219.2 < OD:Max 12.7									-5% ~ +10% of T			Tubulars : -0 ~ +15 Cans : -0 ~ +10		T < 25.4 : 3.5 T≥25.4 : 4.0		T≤20:2.0 T > 20:t/10, Max 3.0	Max 0.15% of L		Square Cut		Not Applicable		Max 1.6			
No.	Item No.	Identication No.	STD	Top	Body	End	STD (OD)	Top (Min / Max)		Top Dv	Body (Min / Max)		Body Dv	End (Min / Max)		End Dv	STD	Min	Max	STD	ACT	In	Out	ACT	0°	90°	Top	End	Top	End	Top	End		
1	314	22-WPQ-001	610	+0.8	+1.1	+1.2	610.0	-2	+1	3	-1	+1	2	-1	0	1	20.00	+0.07	+0.18	2,300	+6	1.5	2.0	0.5	1	0	SC	SC	NA	NA	ACC	ACC	T	ACC
2	315	22-WPQ-002	508	+0.7	+0.8	+0.7	508.0	-2	0	2	-2	+1	3	-3	0	3	20.00	+0.19	+0.22	3,450	+9	1.0	1.5	0.5	1	0	SC	SC	NA	NA	ACC	ACC	T	ACC
3	316	22-WPQ-003	914	+0.2	+0.1	-0.1	914.0	-3	0	3	-2	+1	3	-2	+1	3	50.00	+0.50	+1.02	3,450	+8	1.5	2.0	0.5	1	0	SC	SC	NA	NA	ACC	ACC	T	ACC

~ B L A N K ~

Witnessed by CWBD. QA.

PM PM PIPING SCOTT (KL) LEE -W -R 2022 -08- 03

RM M S KIM 2022 .08. 03 OBO R.M.G.

WITNESSED REVIEWED

TOTAL obo Intertica ☐Review ☑Witness C.Y.CHO 2022 .08. 03

TPI (3.2) ABS CONSULTING 15706 ER SW 03 Aug. 2022

KEOJIN Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

1. Report No. : KJ22-2475-01
2. Client
   Name : CHANGWON BENDING CO., LTD.
   Address : 59, Saengnim-daero 713beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
3. Project Name : WPQ Test
4. Test Method : AWS D1.1 + Total spec
5. Location of Test : ☑ Permanent Testing (Address : Marked on the upper left in the test report.) ☐ On Site Testing
6. Test Environment : Temp. (23 ± 1) °C, Humidity (52 ± 3) % R.H.
7. Receipt Date : 2022. 08. 05.
8. Completion Date : 2022. 08. 08.
9. Purpose of Use : Submisson

<Specimen Information>
Material : TOTAL EP STR 201 S420KT-40
Size : 610.0 X 20.00 mm
Pipe No. : CW-WPQ-001
Heat No. : SF56695
Plate No. : PB70950403

■ Tensile Test Result

Specimen No.	Dimension		Max Load	T.S	Fracture Location	Remark
	Width	Thick.				
	mm	mm	N	N/mm²		
247501-T1	20.05	19.85	215 911.00	542.50	BASE METAL	GS EP STR 301 7.5.4.3
				500 - 690		

■ Bend Test Result

Specimen No.	Dimension		Type	Result	Remark
	Width	Thick.			
	mm	mm			
247501-S1	10.00	20.00	SIDE	No Defect	GS EP STR 201 10.9.2.b)
247501-S2	10.00	20.00	SIDE	No Defect	

- Roller Diameter : 4 T - Angle : 180°

■ Charpy Impact Test Result

Specimen No.	Dimension			1	2	3	Avg.	Notch Type	Test Temp.	Notch Location	Remark
	Width	Thick.	Length								
	mm	mm	mm	Joule (J)	Joule (J)	Joule (J)	Joule (J)				
247501-I1	10.00	10.00	55.00	152.88	92.22	110.27	118.45	2V	-40 °C	W.M	GS EP STR 301 7.5.4.3
247501-I2	10.00	10.00	55.00	287.80	275.47	270.75	278.01	2V	-40 °C	F.L + 2 mm	
						Min. 45J / Avg. 60J					

CWBD (A)DC ☐ ACCEPTED ☑ REVIEWED ☐ WITNESSED
Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. DAIO

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-W -R
2022 -08- 08

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2022 -08- 08

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2022 .08. 08
OBO R.M.G.

ABS CONSULTING 15706 DR SW
☐ WITNESSED ☑ REVIEWED
08 Aug. 2022

Affirmation	Tested by	Technical Manager
	Name : Dae-Sung, An (Signature)	Name : Jae-Nam, Kwon (Signature)

This report is the result of testing with the sample name presented by the client and does not guarantee the quality of the entire product.
This test report shall not be used for public relation, advertisement, lawsuit and any other purposes outside the scope of its defined usage.

This report is not related to KS Q ISO/IEC 17025 and KOLAS certification.

KEOJIN CO.,LTD. President

KEOJIN **Test Report**

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-01

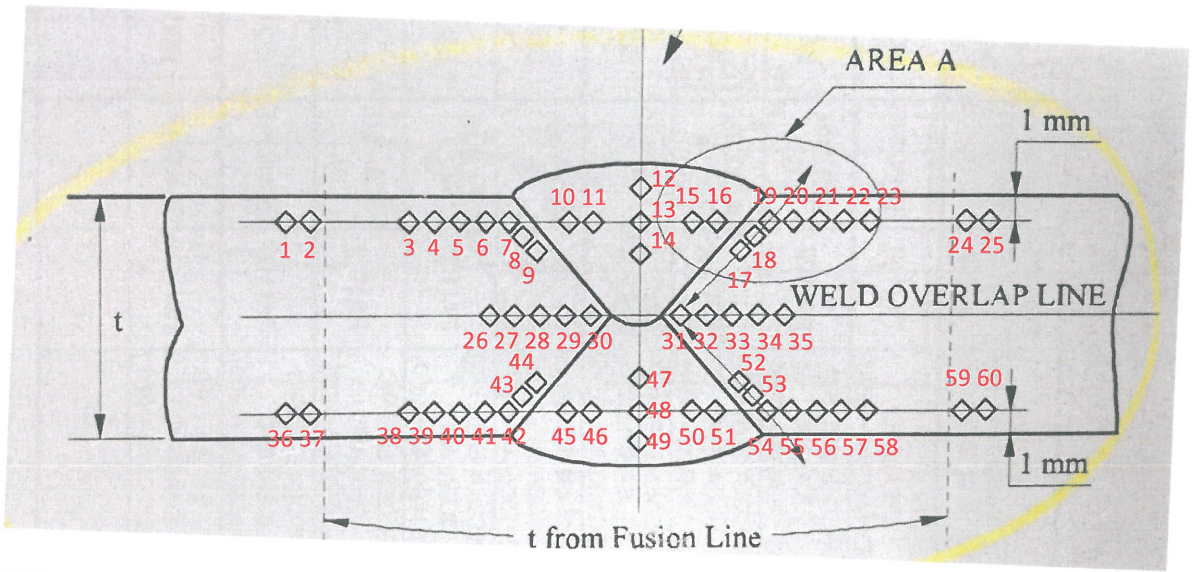
■ Hardness Test Result

Test Result							
Remark : GS EP STR 201 10.9.2.b)							
1	179	19	199	37	186	55	178
2	181	20	189	38	184	56	186
3	182	21	183	39	186	57	184
4	183	22	182	40	185	58	175
5	185	23	183	41	182	59	174
6	189	24	186	42	183	60	177
7	191	25	188	43	185	-	-
8	197	26	188	44	190	-	-
9	194	27	178	45	189	-	-
10	196	28	180	46	202	-	-
11	206	29	176	47	193	-	-
12	205	30	171	48	193	-	-
13	196	31	201	49	195	-	-
14	199	32	189	50	196	-	-
15	197	33	178	51	197	-	-
16	201	34	178	52	198	-	-
17	195	35	180	53	199	-	-
18	192	36	183	54	192	-	-

- Test Load : HV10

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Test Point



CWBD QA/QC ☑ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

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2022 -08- 0 8

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2022 .08. 0 8
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☑ WITNESSED
☑ REVIEWED

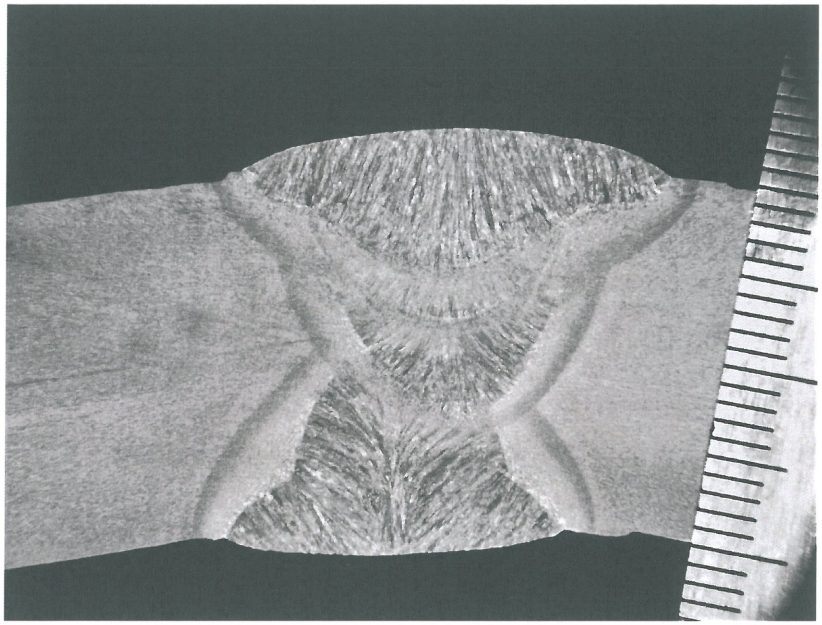
ABS CONSULTING 15706 DSW
08 Aug. 2022

KEOJIN **Test Report**

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-01

■ **Macroetching Test Result**

Picture	Remark
	GS EP STR201 10.9.2.b).

CWSD ACCEPTED
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WITNESSED
Date / Signature: Aug. of. 2022
CHANGWON BRANCH CO., LTD. DNV

ABS CONSULTING 15706 DR SW
08 Aug. 2022

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-W -R
2022 -08- 08

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2022 .08. 08
OBO R.M.G.

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2022 -08- 08

KEOJIN Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

1. Report No. : KJ22-2475-02
2. Client
   Name : CHANGWON BENDING CO., LTD.
   Address : 59, Saengnim-daero 713beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
3. Project Name : WPQ Test
4. Test Method : AWS D1.1 + Total spec
5. Location of Test : ☑ Permanent Testing (Address : Marked on the upper left in the test report.) ☐ On Site Testing
6. Test Environment : Temp. (23 ± 1) °C, Humidity (52 ± 3) % R.H.
7. Receipt Date : 2022. 08. 05.
8. Completion Date : 2022. 08. 08.
9. Purpose of Use : Submisson

<Specimen Information>
Material : TOTAL EP STR 201 S420KT-40 Z35
Size : 508.0 X 20.00 mm
Pipe No. : CW-WPQ-002
Heat No. : SF56697
Plate No. : PB72311701

■ Tensile Test Result

Specimen No.	Dimension		Max Load	T.S	Fracture Location	Remark
	Width	Thick.				
	mm	mm	N	N/mm²		
247502-T1	20.07	19.80	206 614.00	519.93	BASE METAL	GS EP STR 301 7.5.4.3
				500 - 690		

■ Bend Test Result

Specimen No.	Dimension		Type	Result	Remark
	Width	Thick.			
	mm	mm			
247502-S1	10.00	20.00	SIDE	No Defect	GS EP STR 201 10.9.2.b)
247502-S2	10.00	20.00	SIDE	No Defect	

- Roller Diameter : 4 T - Angle : 180°

■ Charpy Impact Test Result

Specimen No.	Dimension			1	2	3	Avg.	Notch Type	Test Temp.	Notch Location	Remark
	Width	Thick.	Length								
	mm	mm	mm	Joule (J)	Joule (J)	Joule (J)	Joule (J)				
247502-I1	10.00	10.00	55.00	109.81	100.36	123.25	111.14	2V	-40 °C	W.M	GS EP STR 301 7.5.4.3
247502-I2	10.00	10.00	55.00	273.19	271.63	272.99	272.60	2V	-40 °C	F.L + 2 mm	
						Min. 45J / Avg. 60J					

CWBO ☑ACCEPTED ☑REVIEWED ☑WITNESSED
Date / Signature: Aug. 08, 2022.

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08 Aug. 2022

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2022 .08. 0 8
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☑REVIEWED

Affirmation	Tested by	Technical Manager
	Name : Dae-Sung, An (Signature)	Name : Jae-Nam, Kwon (Signature)

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This report is not related to KS Q ISO/IEC 17025 and KOLAS certification.

KEOJIN CO.,LTD. President

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Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-02

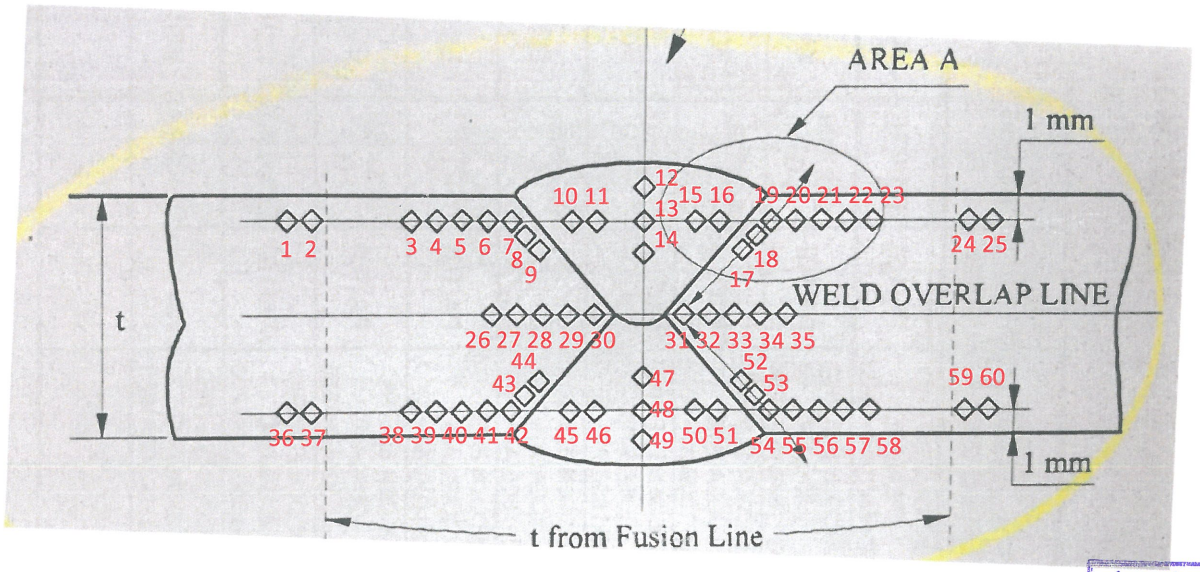
■ Hardness Test Result

Test Result							
Remark : GS EP STR 201 10.9.2.b)							
1	199	19	206	37	193	55	191
2	198	20	194	38	193	56	190
3	196	21	189	39	188	57	179
4	199	22	186	40	185	58	181
5	197	23	188	41	189	59	179
6	195	24	186	42	202	60	182
7	193	25	185	43	197	-	-
8	183	26	187	44	194	-	-
9	184	27	183	45	198	-	-
10	202	28	184	46	194	-	-
11	199	29	178	47	196	-	-
12	189	30	177	48	196	-	-
13	188	31	190	49	201	-	-
14	186	32	192	50	206	-	-
15	201	33	196	51	197	-	-
16	199	34	195	52	199	-	-
17	188	35	187	53	197	-	-
18	199	36	188	54	200	-	-

- Test Load : HV10

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2022 -08- 08

Test Point



CWBD QA/QC
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Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

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08 Aug. 2022

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2022 -08- 08

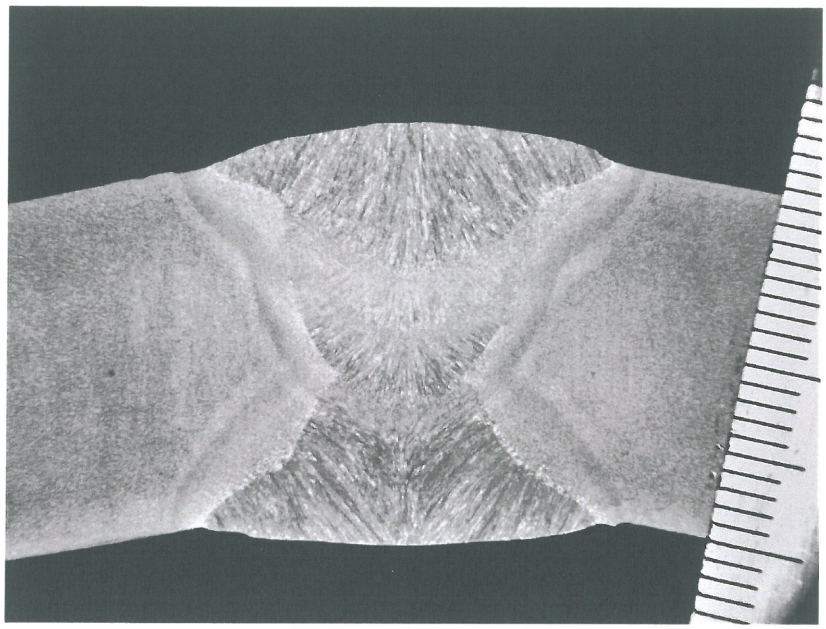
KEOJIN

Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-02

■ Macroetching Test Result

Picture	Remark
	GS EP STR201 10.9.2.b).

CWBO QA/QC
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Date / Signature: Aug. 08, 2022.
CHANGWON BENDING CO., LTD. QA/QC

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2022 .08. 08
OBO R.M.G.

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2022 -08- 08

KEOJIN Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

1. Report No. : KJ22-2475-03
2. Client
   Name : CHANGWON BENDING CO., LTD.
   Address : 59, Saengnim-daero 713beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
3. Project Name : WPQ Test
4. Test Method : AWS D1.1 + Total spec
5. Location of Test : ☑ Permanent Testing (Address : Marked on the upper left in the test report.) ☐ On Site Testing
6. Test Environment : Temp. (23 ± 1) °C, Humidity (52 ± 3) % R.H.
7. Receipt Date : 2022. 08. 05.
8. Completion Date : 2022. 08. 08.
9. Purpose of Use : Submisson

<Specimen Information>

Material : TOTAL EP STR 201 S420KT-40 Z35
Size : 914.0 X 50.00 mm
Pipe No. : CW-WPQ-003
Heat No. : SB51709
Plate No. : PB71625902

■ Tensile Test Result

Specimen No.	Dimension		Max Load	T.S	Fracture Location	Remark
	Width	Thick.				
	mm	mm	N	N/mm²		
247503-T1	20.12	49.82	577 702.00	576.33	WELD METAL	GS EP STR 301 7.5.4.3
				500 - 690		

■ Bend Test Result

Specimen No.	Dimension		Type	Result	Remark
	Width	Thick.			
	mm	mm			
247503-S1	10.00	50.00	SIDE	No Defect	GS EP STR 201 10.9.2.b)
247503-S2	10.00	50.00	SIDE	No Defect	

- Roller Diameter : 4 T - Angle : 180°

■ Charpy Impact Test Result

Specimen No.	Dimension			1	2	3	Avg.	Notch Type	Test Temp.	Notch Location	Remark
	Width	Thick.	Length								
	mm	mm	mm	Joule (J)	Joule (J)	Joule (J)	Joule (J)				
247503-I1	10.00	10.00	55.00	106.95	128.49	97.90	111.11	2V	-40 °C	W.M	GS EP STR 301 7.5.4.3
247503-I2	10.00	10.00	55.00	234.53	225.59	263.71	241.28	2V	-40 °C	F.L + 2 mm	
						Min. 45J / Avg. 60J					

CWBD QA/QC ☑ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

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2022 -08- 08

ABS CONSULTING 15706 ☐R ☐SW ☐W
08 Aug, 2022

M S KIM
2022 .08. 08
OBO R.M.G.

☐WITNESSED
☐REVIEWED

Affirmation	Tested by	Technical Manager
	Name : Dae-Sung, An (Signature)	Name : Jae-Nam, Kwon (Signature)

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☐Witness
C.Y.CHO
2022 -08- 08

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KEOJIN CO.,LTD. President

KEOJIN **Test Report**

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-03

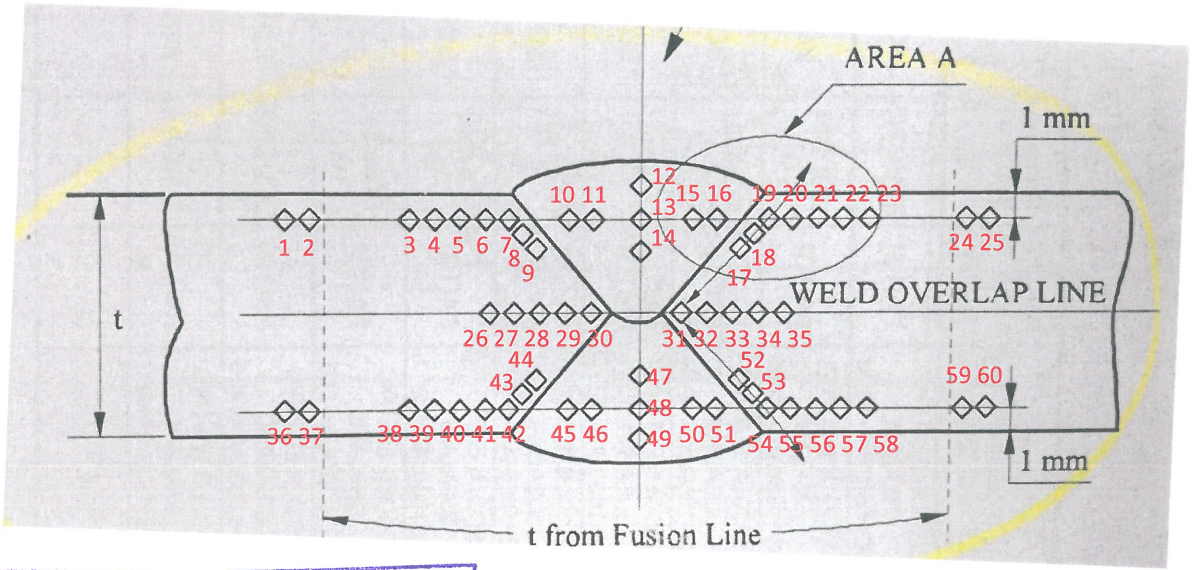
■ Hardness Test Result

Test Result							
Remark : GS EP STR 201 10.9.2.b)							
1	208	19	207	37	203	55	197
2	205	20	199	38	196	56	192
3	199	21	191	39	199	57	190
4	197	22	194	40	192	58	203
5	196	23	195	41	197	59	205
6	197	24	201	42	206	60	198
7	192	25	205	43	215	-	-
8	196	26	195	44	208	-	-
9	196	27	184	45	205	-	-
10	208	28	177	46	207	-	-
11	208	29	184	47	197	-	-
12	194	30	188	48	203	-	-
13	191	31	183	49	198	-	-
14	190	32	181	50	205	-	-
15	208	33	182	51	206	-	-
16	213	34	181	52	203	-	-
17	202	35	185	53	200	-	-
18	206	36	196	54	200	-	-

- Test Load : HV10

PM PIPING
SCOTT (KL) LEE
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2022 -08- 08

Test Point



CWBO QA/QC ☐ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: 8 Aug. 2022
CHANGWON BENDING CO., LTD. QA/QC

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C.Y.CHO
2022 -08- 08

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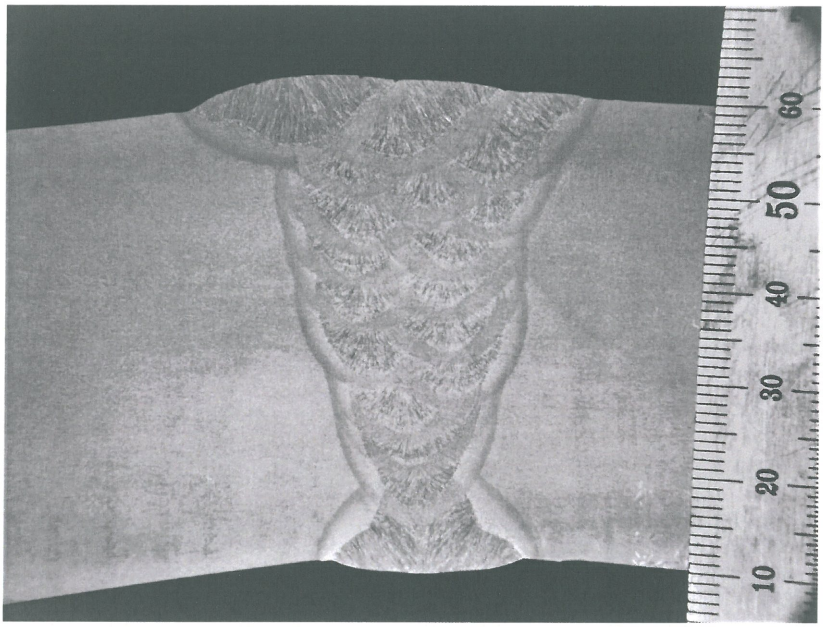
ABS CONSULTING 15706 ER SW BW
08 Aug. 2022

KEOJIN **Test Report**

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

Report No. : KJ22-2475-03

■ Macroetching Test Result

Picture	Remark
	GS EP STR201 10.9.2.b).

CWBD QA/QC ☐ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: Aug. 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

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08 Aug. 2022

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KEOJIN Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

1. Report No. : KJ22-2475-04
2. Client
   Name : CHANGWON BENDING CO., LTD.
   Address : 59, Saengnim-daero 713beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
3. Project Name : WPQ Test
4. Test Method : AWS D1.1 + Total spec
5. Location of Test : ☑ Permanent Testing (Address : Marked on the upper left in the test report.) ☐ On Site Testing
6. Test Environment : Temp. (23 ± 1) °C, Humidity (52 ± 3) % R.H.
7. Receipt Date : 2022. 08. 05.
8. Completion Date : 2022. 08. 08.
9. Purpose of Use : Submisson

<Specimen Information>

Material : TOTAL EP STR 201 S420KT-40 Z35
Size : 508.0 X 20.00 mm
Pipe No. : CW-WPQ-002
Heat No. : SF56697
Plate No. : PB72311701

■ Tensile Test Result

Specimen No.	Dimension		Y.S	T.S	E.L	Test Location	Remark
	Width	Thick					
	mm	mm	N/mm²	N/mm²	%		
247504-T1	20.05	20.13	437.65	539.01	40.69	BASE METAL	GS EP STR301 6.4.5
- Gauge Length : 50 mm			Min. 400	500 - 690	Min. 19.0		

■ Charpy Impact Test Result

Specimen No.	Dimension			1	2	3	Avg.	Notch Type	Test Temp.	Notch Location	Remark
	Width	Thick.	Length								
	mm	mm	mm	Joule (J)	Joule (J)	Joule (J)	Joule (J)				
247504-I1	10.00	10.00	55.00	208.43	205.35	256.78	223.52	2V	-40 °C	B.M	GS EP STR 301.6.4.6
- STRAIN AGEING (250 °C) / 1hr						Min. 45J / Avg. 60J					

CWBO QA/QC ☐ ACCEPTED ☑ REVIEWED ☑ WITNESSED
Date / Signature: Aug. 08, 2022.
CHANGWON BENDING CO., LTD. QA/QC

ABS CONSULTING 15706 ☐R ☐SW ☐W
08 Aug. 2022

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☑Witness
C.Y.CHO
2022 -08- 08

Affirmation	Tested by	Technical Manager
	Name : Dae-Sung, An (Signature)	Name : Jae-Nam, Kwon (Signature)

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KEOJIN CO.,LTD. President

KEOJIN Test Report

65, Techno valley-ro, Jillye-myeon, Gimhae-si, Gyeongsangnam-do, Republic of Korea
TEL. : 055-342-7231 FAX. : 055-342-3125

1. Report No. : KJ22-2475-05
2. Client
   Name : CHANGWON BENDING CO., LTD.
   Address : 59, Saengnim-daero 713beon-gil, Saengnim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
3. Project Name : WPQ Test
4. Test Method : AWS D1.1 + Total spec
5. Location of Test : ☑ Permanent Testing (Address : Marked on the upper left in the test report.) ☐ On Site Testing
6. Test Environment : Temp. (23 ± 1) °C, Humidity (52 ± 3) % R.H.
7. Receipt Date : 2022. 08. 05.
8. Completion Date : 2022. 08. 08.
9. Purpose of Use : Submisson

<Specimen Information>

Material : TOTAL EP STR 201 S420KT-40 Z35
Size : 914.0 X 50.00 mm
Pipe No. : CW-WPQ-003
Heat No. : SB51709
Plate No. : PB71625902

■ Tensile Test Result

Specimen No.	Dimension		Y.S	T.S	E.L	Test Location	Remark
	Width	Thick					
	mm	mm	N/mm²	N/mm²	%		
247505-T1	20.04	49.81	534.77	588.95	41.41	BASE METAL	GS EP STR301 6.4.5
- Gauge Length : 50 mm			Min. 390	500 - 690	Min. 19.0		

■ Charpy Impact Test Result

Specimen No.	Dimension			1	2	3	Avg.	Notch Type	Test Temp.	Notch Location	Remark
	Width	Thick.	Length								
	mm	mm	mm	Joule (J)	Joule (J)	Joule (J)	Joule (J)				
247505-I1	10.00	10.00	55.00	256.44	236.17	281.73	258.11	2V	-40 °C	B.M	GS EP STR 301.6.4.6
- STRAIN AGEING (250 °C) / 1hr						Min. 45J / Avg. 60J					

CWBO QA/QC ☐ACCEPTED ☑REVIEWED ☑WITNESSED
Date / Signature: Aug 08, 2022
CHANGWON BENDING CO., LTD. QA/QC

ABS CONSULTING 15706 ☐R ☐SW ☐W
06 Aug. 2022

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☐WITNESSED ☐REVIEWED

obo Intersica
☐Review
☐Witness
C.Y.CHO
2022 -08- 08

Affirmation	Tested by	Technical Manager
	Name : Dae-Sung, An (Signature)	Name : Jae-Nam, Kwon (Signature)

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KEOJIN CO.,LTD. President

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
PM Piping	1722000931	122A10A	Q012202414

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec — **P.O.**

According to the spc.

TMUGF Firma / MTSMD Signature — Data / Date: **14/10/22**

P. Ancarani

PAOLO ANCARANI

[X] REVIEW

[ ] WITNESS

CUSTOMER

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

B 25973/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
18.577 tons - lbs	146.59 meters - feets	13	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference	PO NO: 5279-22 REV 2
Contract	**50005515**

Dimensions: 355.60 x 15.09 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
6	T14/080-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70407		Heat analysis		0.15	1.22	0.22	0.003	0.011	0.08	0.10	0.17	0.032	0.02	0.060	0.001	0.001	0.0002	0.0083
807780		Heat analysis		0.14	1.25	0.23	0.003	0.010	0.13	0.12	0.16	0.027	0.03	0.063	0.002	0.003	0.0001	0.0097
70407	22-797	Product analysis		0.15	1.21	0.20	0.003	0.010	0.08	0.09	0.16	0.033	0.02	0.060	0.001	0.001	0.0001	0.0079
70407	22-797	Product analysis		0.15	1.21	0.20	0.003	0.009	0.08	0.09	0.16	0.033	0.02	0.060	0.001	0.001	0.0001	0.0081
807780	22-797	Product analysis		0.14	1.23	0.22	0.003	0.008	0.12	0.11	0.16	0.029	0.03	0.061	0.001	0.002	0.0001	0.0094
807780	22-797	Product analysis		0.14	1.24	0.21	0.003	0.009	0.12	0.11	0.16	0.028	0.03	0.061	0.001	0.002	0.0001	0.0096

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
70407		Heat analysis		3.86	0.061	0.062	0.40
807780		Heat analysis		2.78	0.065	0.068	0.41
70407	22-797	Product analysis		4.18	0.061	0.062	0.40
70407	22-797	Product analysis		4.07	0.061	0.062	0.40
807780	22-797	Product analysis		3.09	0.062	0.064	0.41
807780	22-797	Product analysis		2.92	0.062	0.064	0.41

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE$_{IIW}$ = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★★ România

Inspector/Buyer representative

Witnessed/Reviewed
Florin Hriscu
19.09.22

BUREAU VERITAS ROMANIA PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/3 B 25973/1 16.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 18.577 tons - lbs	Total Length: 146.59 meters - feets	Pieces 13	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 355.60 x 15.09 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
6	T14/080-01/S355KL0		205	-	20.5	5	

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: 0.93
		mm	inch	mm	inch	mm	inch	mm²	inch²							
70407	Longitudinal Flat	50.8	-	40.00	-	15.90	-	636.0	-	22-3222	423.00	-	527.00	-	42.10	0.80
807780	Longitudinal Flat	50.8	-	40.00	-	16.30	-	652.0	-	22-3222	425.00	-	531.00	-	42.80	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
70407	22-4902	Transversal	10x10x55	0	-	165	172	179	27.0	172	-	-	-	95	95	95	1.48	1.55	1.60
70407	22-4903	Longitudinal	10x10x55	0	37.0	190	197	205	50.0	197	-	-	-	95	95	100	1.70	1.76	1.83
807780	22-4902	Transversal	10x10x55	0	-	184	168	175	27.0	176	-	-	-	95	95	95	1.65	1.51	1.57
807780	22-4903	Longitudinal	10x10x55	0	37.0	201	209	193	50.0	201	-	-	-	100	100	95	1.79	1.86	1.73

Heat

Heat	Pieces	Length (m)	Weight (kg)
70407	4	-	-
807780	9	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/28/91 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
19.09.22

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/3 B 25973/1 16.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 18.577 tons - lbs	Total Length: 146.59 meters - feets	Pieces 13	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 355.60 x 15.09 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
6	T14/080-01/S355KL0		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA, ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/92 ★★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
19.09.22

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 6

ITEM NO: T14/080-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER
ROMAN, NEAMT COUNTY

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES
19.09.22

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
355.60	15.09	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-25-79	70407	11.43	1448
2	2-22-25-82	70407	11.53	1461
3	2-22-25-81	70407	11.59	1469
4	2-22-25-83	70407	11.38	1442
5	2-20-48-1194	807780	11.29	1431
6	2-20-48-1192	807780	11.59	1469
7	2-20-48-1195	807780	10.76	1364
8	2-20-48-1197	807780	11.50	1457
9	2-20-48-1196	807780	11.49	1456
10	2-20-48-1198	807780	11.30	1432
11	2-20-48-1199	807780	10.13	1284
12	2-20-48-1190	807780	11.56	1465
13	2-20-48-1193	807780	11.04	1399

Arcelor Mittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★★ România

TOTAL NUMBER OF PIECES: 13
TOTAL METERS: 146.59
TOTAL KILOS: 18 577

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 16.09.2022

2173/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/3

B 25974/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
7.873 tons - lbs	185.04 meters - feets	16	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 219.10 x 8.18 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
8	T8/050-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	202	-	20.2	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46074K		Heat analysis		0.14	1.30	0.22	0.002	0.013	0.05	0.04	0.11	0.026	0.01	0.073	0.005	0.002	0.0001	0.0081
46074K	22-798	Product analysis		0.14	1.28	0.21	0.002	0.013	0.05	0.04	0.10	0.025	0.01	0.071	0.005	0.002	0.0001	0.0080
46074K	22-798	Product analysis		0.14	1.30	0.21	0.002	0.013	0.05	0.04	0.10	0.025	0.01	0.072	0.005	0.002	0.0001	0.0078

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
46074K		Heat analysis		3.21	0.078	0.080	0.40
46074K	22-798	Product analysis		3.13	0.076	0.078	0.39
46074K	22-798	Product analysis		3.21	0.077	0.079	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
46074K	Longitudinal Flat	50.8	-	40.00	-	8.90	-	356.0	-	22-3223	421.00	-	523.00	-	40.30	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

19.09.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 1828 ROMAN

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/3 B 25974/1 16.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 7.873 tons - lbs	Total Length: 185.04 meters - feets	Pieces 16	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 219.10 x 8.18 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
8	T8/050-01/S355KL0		202	-	20.2	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
46074K	22-4904	Transversal	10x5x55	0	-	186	172	162	14.0	173	-	-	-	90	85	85	0.78	0.72	0.67

Heat

Heat	Pieces	Length (m)	Weight (kg)
46074K	16	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

19.09.22

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/3 B 25974/1 16.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 7.873 tons - lbs	Total Length: 185.04 meters - feets	Pieces 16	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 219.10 x 8.18 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
8	T8/050-01/S355KL0		202	-	20.2	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, Liberty OSTRAVA a.s Vratimovska 689/117, 719 00 Slezska Ostrava-Kuncice, Czechia .
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Romania S.A. J27/88/91 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

19.09.22

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 8

ITEM NO: T8/050-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
219.10	8.18	X52NO

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES
19.09.22

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-35-32	46074K	11.47	488
2	2-22-35-29	46074K	11.60	494
3	2-22-35-25	46074K	11.65	496
4	2-22-35-40	46074K	11.63	495
5	2-22-35-24	46074K	11.64	495
6	2-22-35-26	46074K	11.61	494
7	2-22-35-30	46074K	11.63	495
8	2-22-35-28	46074K	11.62	494
9	2-22-35-35	46074K	11.50	489
10	2-22-35-31	46074K	11.60	494
11	2-22-35-37	46074K	11.31	481
12	2-22-35-21	46074K	11.66	496
13	2-22-35-33	46074K	11.47	488
14	2-22-35-22	46074K	11.62	494
15	2-22-35-23	46074K	11.56	492
16	2-22-35-38	46074K	11.47	488

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal România

TOTAL NUMBER OF PIECES: 16
TOTAL METERS: 185.04
TOTAL KILOS: 7 873

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 16.09.2022

2177/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
PM Piping	1722000931	122A10A	Q012202420

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec P.O.

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

P. Ancarani — 19/10/22

PAOLO ANCARANI

[X] REVIEW

[ ] WITNESS

CUSTOMER

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/3

B 26116/1

08.10.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
11.055 tons - lbs	183.37 meters - feets	16	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 273.00 x 9.27 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
1	T10/058-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70888		Heat analysis		0.14	1.23	0.21	0.004	0.013	0.08	0.10	0.20	0.032	0.02	0.066	0.001	0.001	0.0002	0.0082
70888	22-868	Product analysis		0.14	1.25	0.22	0.004	0.011	0.07	0.10	0.18	0.034	0.02	0.065	0.001	0.001	0.0002	0.0079
70888	22-868	Product analysis		0.14	1.25	0.23	0.003	0.011	0.07	0.09	0.18	0.033	0.02	0.064	0.001	0.001	0.0002	0.0081

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
70888		Heat analysis		3.90	0.067	0.068	0.40
70888	22-868	Product analysis		4.30	0.066	0.067	0.40
70888	22-868	Product analysis		4.07	0.065	0.066	0.40

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS
		mm	inch	mm	inch	mm	inch	mm²	inch²							
70888	Longitudinal Flat	50.8	-	40.00	-	10.10	-	404.0	-	22-3477	422.00	-	525.00	-	40.60	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12.10.22

BUREAU VERITAS ROMANIA
PARIS
INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/3 B 26116/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.055 tons - lbs	Total Length: 183.37 meters - feets	Pieces 16	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 273.00 x 9.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
1	T10/058-01/S355KL0		205	-	20.5	5	X52NO-PSL2 -

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
70888	22-5348	Transversal	10x7.5x55	0	-	126	138	131	20.0	132	-	-	-	90	95	95	1.11	1.22	1.16

Heat

Heat	Pieces	Length (m)	Weight (kg)
70888	16	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12.10.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 82

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/3 B 26116/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.055 tons - lbs	Total Length: 183.37 meters - feets	Pieces 16	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 273.00 x 9.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
1	T10/058-01/S355KL0		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Județ Hunedoara, ROMANIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.

Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12.10.22

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 1
ITEM NO: T10/058-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
273.00	9.27	X52NO

Witnessed/Reviewed
Florin Hriscu

BUREAU ... ROMANIA
26
PARIS
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INDUSTRY & FACILITIES
12-10-22

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-39-1197	70888	11.13	671
2	2-22-39-1191	70888	11.62	701
3	2-22-39-1195	70888	11.24	678
4	2-22-39-1196	70888	11.66	703
5	2-22-39-1188	70888	11.79	711
6	2-22-39-1198	70888	11.63	701
7	2-22-39-1193	70888	11.31	682
8	2-22-39-1189	70888	11.40	687
9	2-22-39-1187	70888	11.53	695
10	2-22-39-1201	70888	11.27	679
11	2-22-39-1184	70888	11.78	710
12	2-22-39-1183	70888	11.23	677
13	2-22-39-1185	70888	11.08	668
14	2-22-39-1186	70888	11.50	693
15	2-22-39-1190	70888	11.67	704
16	2-22-39-1182	70888	11.53	695

TOTAL NUMBER OF PIECES: 16
TOTAL METERS: 183.37
TOTAL KILOS: 11 055

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 08.10.2022

ArcelorMittal Tubular Products Roman S.A.
ArcelorMittal
J27/88/91
România

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

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B 26068/1

08.10.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
21.823 tons - lbs	303.65 meters - feets	27	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 273.00 x 11.13 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
2	T10/068-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
464825		Heat analysis		0.13	1.20	0.20	0.004	0.011	0.15	0.09	0.13	0.021	0.05	0.064	0.001	0.002	0.0001	0.0082
70887		Heat analysis		0.15	1.25	0.20	0.004	0.013	0.08	0.10	0.20	0.034	0.01	0.063	0.001	0.001	0.0003	0.0075
69850		Heat analysis		0.14	1.23	0.18	0.005	0.015	0.06	0.07	0.19	0.030	0.02	0.065	0.001	0.001	0.0003	0.0076
464825	22-845	Product analysis		0.13	1.21	0.22	0.004	0.009	0.15	0.09	0.14	0.023	0.04	0.062	0.001	0.001	0.0001	0.0080
464825	22-845	Product analysis		0.13	1.21	0.21	0.004	0.010	0.15	0.09	0.14	0.023	0.04	0.063	0.001	0.001	0.0001	0.0078
70887	22-845	Product analysis		0.15	1.24	0.21	0.003	0.012	0.08	0.09	0.18	0.032	0.01	0.062	0.001	0.001	0.0002	0.0075
70887	22-845	Product analysis		0.15	1.23	0.21	0.004	0.011	0.08	0.09	0.18	0.033	0.01	0.062	0.001	0.001	0.0002	0.0073
69850	22-173	Product analysis		0.14	1.22	0.21	0.005	0.013	0.06	0.06	0.18	0.033	0.02	0.064	0.001	0.001	0.0003	0.0073
69850	22-173	Product analysis		0.14	1.23	0.20	0.004	0.014	0.06	0.06	0.18	0.032	0.02	0.064	0.001	0.001	0.0002	0.0071

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/89/93 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

12.10.22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/4 B 26068/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 21.823 tons - lbs	Total Length: 303.65 meters - feets	Pieces 27	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 273.00 x 11.13 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
2	T10/068-01/S355KL0		205	-	20.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
464825		Heat analysis		2.56	0.065	0.067	0.40
70887		Heat analysis		4.53	0.064	0.065	0.41
69850		Heat analysis		3.95	0.066	0.067	0.39
464825	22-845	Product analysis		2.88	0.063	0.064	0.40
464825	22-845	Product analysis		2.95	0.064	0.065	0.40
70887	22-845	Product analysis		4.27	0.063	0.064	0.41
70887	22-845	Product analysis		4.52	0.063	0.064	0.40
69850	22-173	Product analysis		4.52	0.065	0.066	0.39
69850	22-173	Product analysis		4.51	0.065	0.066	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
464825	Longitudinal Flat	50.8	-	40.00	-	11.80	-	472.0	-	22-3391	423.00	-	526.00	-	40.70	0.80
70887	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	22-3391	425.00	-	529.00	-	41.60	0.80
69850	Longitudinal Flat	50.8	-	40.00	-	12.10	-	484.0	-	22-3517	423.00	-	526.00	-	41.60	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
17.10.22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 26068/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 21.823 tons - lbs	Total Length: 303.65 meters - feets	Pieces 27	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 273.00 x 11.13 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
2	T10/068-01/S355KL0		205	-	20.5	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
464825	22-5200	Transversal	10x7.5x55	0	-	126	139	130	20.0	132	-	-	-	90	95	95	1.10	1.23	1.14
70887	22-5200	Transversal	10x7.5x55	0	-	135	144	123	20.0	134	-	-	-	95	95	90	1.19	1.27	1.08
69850	22-5393	Transversal	10x7.5x55	0	-	146	139	132	20.0	139	-	-	-	95	95	95	1.29	1.23	1.17

Heat

Heat	Pieces	Length (m)	Weight (kg)
464825	1	-	-
70887	25	-	-
69850	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/28/91 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

12.10.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 62

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 26068/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 21.823 tons - lbs	Total Length: 303.65 meters - feets	Pieces 27	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 273.00 x 11.13 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
2	T10/068-01/S355KL0		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.

Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★ Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12-10-22

BUREAU VERITAS ROMANIA 26 PARIS 82 INDUSTRY & FACILITIES

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 2
ITEM NO: T10/068-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA
20
PARIS
82.
INDUSTRY & FACILITIES

12-10.22

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
273.00	11.13	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-39-722	70887	11.37	817
2	2-22-39-728	70887	11.19	804
3	2-22-39-725	70887	11.71	842
4	2-22-39-721	70887	11.27	810
5	2-22-39-726	70887	11.26	809
6	2-22-39-734	70887	11.08	796
7	2-22-39-735	70887	10.76	773
8	2-22-39-731	70887	11.09	797
9	2-22-39-733	70887	11.13	800
10	2-22-39-738	70887	11.32	814
11	2-22-39-739	70887	10.92	785
12	2-22-39-736	70887	10.77	774
13	2-22-39-740	70887	11.41	820
14	2-22-39-741	70887	11.49	826
15	2-22-39-737	70887	11.67	839
16	2-22-39-720	70887	11.54	829
17	2-22-39-719	70887	11.05	794
18	2-22-39-742	70887	11.66	838

19	2-22-39-729	70887	11.13	800
20	2-22-39-744	70887	11.76	845
21	2-22-39-718	70887	11.03	793
22	2-22-39-730	70887	11.53	829
23	2-22-39-723	70887	11.48	825
24	2-22-39-727	70887	11.22	806
25	2-22-39-724	70887	11.22	806
26	2-22-4-429	69850	10.78	775
27	2-22-33-42	464825	10.81	777

TOTAL NUMBER OF PIECES: 27
TOTAL METERS: 303.65
TOTAL KILOS: 21 823

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 08.10.2022

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/39/91 ★★★★★ România

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

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B 26069/1

08.10.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
11.349 tons - lbs	142.40 meters - feets	13	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 323.80 x 10.31 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
3	T12/063-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	195	-	19.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69374		Heat analysis		0.15	1.23	0.15	0.005	0.014	0.07	0.07	0.18	0.037	0.02	0.065	0.001	0.001	0.0002	0.0064
69476		Heat analysis		0.14	1.27	0.22	0.005	0.014	0.09	0.14	0.20	0.028	0.02	0.063	0.001	0.001	0.0002	0.0085
807770		Heat analysis		0.15	1.22	0.23	0.003	0.010	0.08	0.09	0.15	0.030	0.02	0.066	0.002	0.003	0.0001	0.0085
809544		Heat analysis		0.13	1.24	0.19	0.004	0.009	0.07	0.09	0.19	0.025	0.03	0.065	0.002	0.003	0.0001	0.0068
69374	22-878	Product analysis		0.15	1.25	0.18	0.005	0.013	0.07	0.07	0.17	0.035	0.02	0.063	0.001	0.001	0.0001	0.0066
69374	22-878	Product analysis		0.14	1.25	0.18	0.004	0.012	0.07	0.08	0.17	0.036	0.02	0.064	0.001	0.001	0.0001	0.0064
69476	22-878	Product analysis		0.14	1.27	0.21	0.005	0.012	0.08	0.13	0.18	0.030	0.02	0.062	0.001	0.001	0.0001	0.0082
69476	22-878	Product analysis		0.14	1.28	0.21	0.005	0.012	0.08	0.12	0.18	0.031	0.02	0.062	0.001	0.001	0.0001	0.0084
807770	22-878	Product analysis		0.15	1.24	0.21	0.003	0.011	0.08	0.08	0.14	0.032	0.02	0.064	0.001	0.002	0.0001	0.0082
807770	22-878	Product analysis		0.15	1.23	0.22	0.003	0.011	0.08	0.08	0.14	0.032	0.02	0.065	0.001	0.002	0.0001	0.0083
809544	22-847	Product analysis		0.13	1.26	0.20	0.004	0.011	0.07	0.08	0.18	0.027	0.03	0.065	0.002	0.002	0.0001	0.0069
809544	22-847	Product analysis		0.14	1.26	0.20	0.004	0.010	0.07	0.08	0.18	0.026	0.03	0.064	0.002	0.002	0.0001	0.0067

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
(Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

12-10-22

Formular 12A2, rev. 3

2189/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 26069/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.349 tons - lbs	Total Length: 142.40 meters - feets	Pieces 13	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 323.80 x 10.31 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
3	T12/063-01/S355KL0		195	-	19.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
69374		Heat analysis		5.78	0.066	0.067	0.40
69476		Heat analysis		3.29	0.064	0.065	0.41
807770		Heat analysis		3.53	0.068	0.071	0.40
809544		Heat analysis		3.68	0.067	0.070	0.39
69374	22-878	Product analysis		5.30	0.064	0.065	0.40
69374	22-878	Product analysis		5.63	0.065	0.066	0.40
69476	22-878	Product analysis		3.66	0.063	0.064	0.40
69476	22-878	Product analysis		3.69	0.063	0.064	0.41
807770	22-878	Product analysis		3.90	0.065	0.067	0.40
807770	22-878	Product analysis		3.86	0.066	0.068	0.40
809544	22-847	Product analysis		3.91	0.067	0.069	0.39
809544	22-847	Product analysis		3.88	0.066	0.068	0.40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12.10.22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5 B 26069/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.349 tons - lbs	Total Length: 142.40 meters - feets	Pieces 13	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 10.31 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
3	T12/063-01/S355KL0		195	-	19.5	5	

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
69374	Longitudinal Flat	50.8	-	40.00	-	11.20	-	448.0	-	22-3518	424.00	-	526.00	-	41.40	0.81
69476	Longitudinal Flat	50.8	-	40.00	-	10.80	-	432.0	-	22-3518	422.00	-	524.00	-	40.80	0.81
807770	Longitudinal Flat	50.8	-	40.00	-	10.60	-	424.0	-	22-3518	421.00	-	523.00	-	40.50	0.80
809544	Longitudinal Flat	50.8	-	40.00	-	10.90	-	436.0	-	22-3390	423.00	-	526.00	-	40.60	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
69374	22-5394	Transversal	10x7.5x55	0	-	123	129	137	20.0	130	-	-	-	90	90	95	1.09	1.14	1.21
69476	22-5394	Transversal	10x7.5x55	0	-	127	135	144	20.0	135	-	-	-	90	95	95	1.12	1.19	1.27
807770	22-5394	Transversal	10x7.5x55	0	-	141	148	133	20.0	141	-	-	-	95	95	95	1.25	1.31	1.17
809544	22-5203	Transversal	10x7.5x55	0	-	121	128	138	20.0	129	-	-	-	90	90	95	1.05	1.12	1.21

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
(Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12-10.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 82

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 26069/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.349 tons - lbs	Total Length: 142.40 meters - feets	Pieces 13	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 10.31 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
3	T12/063-01/S355KL0		195	-	19.5	5	

Heat

Heat	Pieces	Length (m)	Weight (kg)
69374	1	-	-
69476	5	-	-
807770	2	-	-
809544	5	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/88/91 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 82

12.10.22

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 26069/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 11.349 tons - lbs	Total Length: 142.40 meters - feets	Pieces 13	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 323.80 x 10.31 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
3	T12/063-01/S355KL0		195	-	19.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA, ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.

Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
(Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/89/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

12.10.22

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 3
ITEM NO: T12/063-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
323.80	10.31	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-38-1087	809544	10.54	840
2	2-22-38-1091	809544	11.20	893
3	2-22-38-1085	809544	10.37	827
4	2-22-38-1088	809544	10.23	815
5	2-22-38-1081	809544	10.28	819
6	2-21-42-1687	69476	11.00	877
7	2-21-42-1696	69476	11.09	884
8	2-21-42-1705	69476	10.83	863
9	2-21-42-1686	69476	11.03	879
10	2-21-42-1698	69476	11.13	887
11	2-21-42-2109	69374	11.32	902
12	2-20-47-439	807770	11.82	942
13	2-20-47-450	807770	11.56	921

Witnessed/Reviewed .
Florin Hriscu

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES
20 PARIS 82?
12.10.22

TOTAL NUMBER OF PIECES: 13
TOTAL METERS: 142.40
TOTAL KILOS: 11 349

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 08.10.2022

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 1/3 **B 26070/1** **29.09.2022**	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 20.696 tons - lbs	Total Length: 212.39 meters - feets	Pieces 18	Bundles -
Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;					
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 323.80 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	-	
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:	X52NO-PSL2
4	T12/074-01/S355KT-40		205	-	20.5	5		-
					Bill:		Transport:	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.005	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45814K		Heat analysis		0.15	1.26	0.18	0.004	0.015	0.05	0.05	0.12	0.021	0.01	0.072	0.001	0.002	0.0002	0.0088
45814K	22-846	Product analysis		0.14	1.25	0.20	0.004	0.013	0.05	0.06	0.12	0.024	0.01	0.071	0.001	0.002	0.0002	0.0088
45814K	22-846	Product analysis		0.14	1.24	0.20	0.004	0.013	0.05	0.06	0.13	0.023	0.01	0.070	0.001	0.002	0.0002	0.0087

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
45814K		Heat analysis		2.39	0.073	0.075	0.40
45814K	22-846	Product analysis		2.73	0.072	0.074	0.39
45814K	22-846	Product analysis		2.64	0.071	0.073	0.39

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max.
		mm	inch	mm	inch	mm	inch	mm²	inch²							
45814K	Longitudinal Flat	50.8	-	40.00	-	13.20	-	528.0	-	22-3392	425.00	-	529.00	-	41.70	0.80
45814K	Longitudinal Flat	50.8	-	40.00	-	13.80	-	552.0	-	22-3392	427.00	-	532.00		42.20	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Inspector/Buyer representative
Witnessed/Reviewed
Florin Hriscu
12-10.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES PARIS 82

2195/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/3 B 26070/1 29.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 20.696 tons - lbs	Total Length: 212.39 meters - feets	Pieces 18	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
4	T12/074-01/S355KT-40		205	-	20.5	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
45814K	22-5201	Transversal	10x10x55	-40	-	195	204	183	27.0	194	-	-	-	95	100	95	1.74	1.82	1.64
45814K	22-5202	Longitudinal	10x10x55	-40	37.0	213	222	229	50.0	221	-	-	-	100	100	100	1.89	1.93	1.97
45814K	22-5201	Transversal	10x10x55	-40	-	201	207	192	27.0	200	-	-	-	100	100	95	1.79	1.84	1.72
45814K	22-5202	Longitudinal	10x10x55	-40	37.0	234	211	223	50.0	223	-	-	-	100	100	100	2.01	1.88	1.93

Heat

Heat	Pieces	Length (m)	Weight (kg)
45814K	18	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J22/86/93 ★★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 92

12-10-22

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/3 B 26070/1 29.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 20.696 tons - lbs	Total Length: 212.39 meters - feets	Pieces 18	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 12.70 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
4	T12/074-01/S355KT-40		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, Liberty OSTRAVA a.s Vratimovska 689/117, 719 00 Slezska Ostrava-Kuncice, Czechia.
Visual inspection and dimensional check without objection.
Heat treatment normalizing at temperature of 890-940°C,time soaking 12 min.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/8C/91 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 92

12.10.22

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 4
ITEM NO: T12/074-01/S355KT-40

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
323.80	12.70	X52NO

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA
PARIS
INDUSTRY & FACILITIES
12-10-22

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-38-1064	45814K	11.92	1161
2	2-22-38-1057	45814K	11.87	1157
3	2-22-38-1063	45814K	11.94	1163
4	2-22-38-1065	45814K	11.92	1161
5	2-22-38-1054	45814K	11.80	1150
6	2-22-38-1053	45814K	11.77	1147
7	2-22-38-1068	45814K	12.00	1169
8	2-22-38-1074	45814K	11.44	1115
9	2-22-38-1067	45814K	11.91	1161
10	2-22-38-1073	45814K	11.88	1158
11	2-22-38-1066	45814K	12.00	1169
12	2-22-38-1058	45814K	11.90	1160
13	2-22-38-1071	45814K	12.00	1169
14	2-22-38-1061	45814K	11.91	1161
15	2-22-38-1062	45814K	11.96	1165
16	2-22-38-1059	45814K	10.50	1023
17	2-22-38-1072	45814K	11.90	1160
18	2-22-38-1051	45814K	11.77	1147

TOTAL NUMBER OF PIECES: 18
TOTAL METERS: 212.39
TOTAL KILOS: 20 696

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 29.09.2022

ArcelorMittal Tubular Products Roman S.A. Romania

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 1/5	ArcelorMittal
		B 25982/1 Rev. 1	
		21.09.2022	

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces 9	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 14.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
5	T12/079-01/S355KL0		205	-	20.5	5	
					Bill:		Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
264212		Heat analysis		0.15	1.21	0.21	0.003	0.013	0.09	0.09	0.17	0.023	0.02	0.060	0.001	0.002	0.0001	0.0087
41960K		Heat analysis		0.16	1.20	0.21	0.003	0.011	0.04	0.04	0.09	0.023	0.01	0.077	0.001	0.002	0.0001	0.0075
807765		Heat analysis		0.14	1.23	0.23	0.001	0.009	0.11	0.09	0.19	0.025	0.02	0.070	0.002	0.003	0.0001	0.0089
807766		Heat analysis		0.14	1.22	0.21	0.002	0.009	0.11	0.10	0.17	0.029	0.02	0.065	0.003	0.003	0.0001	0.0075
264212	22-799	Product analysis		0.15	1.21	0.21	0.003	0.011	0.08	0.08	0.16	0.026	0.02	0.060	0.001	0.003	0.0001	0.0085
264212	22-799	Product analysis		0.14	1.22	0.22	0.003	0.012	0.08	0.08	0.16	0.025	0.02	0.060	0.001	0.003	0.0001	0.0083
41960K	22-799	Product analysis		0.15	1.20	0.23	0.002	0.010	0.04	0.05	0.10	0.024	0.01	0.075	0.001	0.003	0.0001	0.0072
41960K	22-799	Product analysis		0.15	1.21	0.23	0.003	0.010	0.04	0.05	0.10	0.024	0.01	0.075	0.001	0.003	0.0001	0.0071
807765	22-799	Product analysis		0.14	1.25	0.22	0.001	0.008	0.10	0.09	0.18	0.027	0.02	0.068	0.002	0.003	0.0001	0.0086
807765	22-799	Product analysis		0.13	1.25	0.23	0.001	0.008	0.10	0.09	0.18	0.027	0.02	0.067	0.002	0.003	0.0001	0.0088
807766	22-799	Product analysis		0.14	1.23	0.22	0.002	0.010	0.10	0.09	0.16	0.031	0.02	0.063	0.002	0.003	0.0001	0.0076
807766	22-799	Product analysis		0.14	1.24	0.22	0.002	0.009	0.10	0.09	0.16	0.030	0.02	0.064	0.002	0.003	0.0001	0.0074

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/98/91 Romania

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12.10.22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 2/5 B 25982/1 Rev. 1 21.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces 9	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 14.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
5	T12/079-01/S355KL0		205	-	20.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
264212		Heat analysis		2.64	0.061	0.063	0.40
41960K		Heat analysis		3.07	0.078	0.080	0.39
807765		Heat analysis		2.81	0.072	0.075	0.40
807766		Heat analysis		3.87	0.068	0.071	0.40
264212	22-799	Product analysis		3.06	0.061	0.064	0.40
264212	22-799	Product analysis		3.01	0.061	0.064	0.39
41960K	22-799	Product analysis		3.33	0.076	0.079	0.39
41960K	22-799	Product analysis		3.38	0.076	0.079	0.39
807765	22-799	Product analysis		3.14	0.070	0.073	0.40
807765	22-799	Product analysis		3.07	0.069	0.072	0.39
807766	22-799	Product analysis		4.08	0.065	0.068	0.40
807766	22-799	Product analysis		4.05	0.066	0.069	0.40

$CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$ $CE_S = C+Mn/6$ $CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/86/92 ★★★★★ Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 2C PARIS 82

12.10.22

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/5	ArcelorMittal
		B 25982/1 Rev. 1	
		21.09.2022	

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces 9	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 14.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
5	T12/079-01/S355KL0		205	-	20.5	5	

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
264212	Longitudinal Flat	50.8	-	40.00	-	15.10	-	604.0	-	22-3238	424.00	-	526.00	-	41.30	0.81
41960K	Longitudinal Flat	50.8	-	40.00	-	15.30	-	612.0	-	22-3238	424.00	-	527.00	-	41.60	0.80
807765	Longitudinal Flat	50.8	-	40.00	-	14.80	-	592.0	-	22-3238	422.00	-	525.00	-	40.90	0.80
807766	Longitudinal Flat	50.8	-	40.00	-	15.70	-	628.0	-	22-3238	426.00	-	530.00	-	41.90	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
264212	22-4926	Transversal	10x10x55	0	-	169	175	188	27.0	177	-	-	-	95	95	95	1.52	1.58	1.70
264212	22-4932	Longitudinal	10x10x55	0	37.0	213	192	204	50.0	203	-	-	-	100	95	100	1.89	1.73	1.82
41960K	22-4926	Transversal	10x10x55	0	-	191	180	166	27.0	179	-	-	-	95	95	95	1.71	1.62	1.49
41960K	22-4932	Longitudinal	10x10x55	0	37.0	204	216	229	50.0	216	-	-	-	100	100	100	1.82	1.91	1.97
807765	22-4926	Transversal	10x10x55	0	-	186	173	195	27.0	185	-	-	-	95	95	95	1.68	1.56	1.74
807765	22-4932	Longitudinal	10x10x55	0	37.0	211	227	220	50.0	219	-	-	-	100	100	100	1.88	1.96	1.93
807766	22-4926	Transversal	10x10x55	0	-	171	178	187	27.0	179	-	-	-	95	95	95	1.54	1.60	1.67
807766	22-4932	Longitudinal	10x10x55	0	37.0	197	208	219	50.0	208	-	-	-	95	100	100	1.77	1.85	1.92

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/93. Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12.10.22

BUREAU VERITAS ROMANIA 2C PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/5 B 25982/1 Rev. 1 21.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces 9	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 323.80 x 14.27 mm - / Schedule: -	Length: 10.00 - 12.00 m -		- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
5	T12/079-01/S355KL0		205	-	20.5	5	X52NO-PSL2 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
264212	6	-	-
41960K	1	-	-
807765	1	-	-
807766	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 Romania

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
17.10.22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 5/5 B 25982/1 Rev. 1 21.09.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces 9	Bundles -
	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Buyer's reference PO NO: 5279-22 REV 2	Dimensions: 323.80 x 14.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -
Contract 50005515					

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
5	T12/079-01/S355KL0		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, Liberty OSTRAVA a.s Vratimovska 689/117, 719 00 Slezska Ostrava-Kuncice, Czechia, ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12-10-22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 5

ITEM NO: T12/079-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 1828 ROMAN INDUSTRY & FACILITIES

19.09.22

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
323.80	14.27	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-21-46-999	41960K	11.00	1198
2	2-20-50-1011	807765	11.68	1272
3	2-20-50-1035	807766	11.84	1290
4	2-20-40-574	264212	10.77	1173
5	2-20-40-540	264212	11.16	1216
6	2-20-40-572	264212	10.98	1196
7	2-20-40-569	264212	11.11	1210
8	2-20-40-571	264212	10.90	1187
9	2-20-40-573	264212	11.09	1208

TOTAL NUMBER OF PIECES: 9
TOTAL METERS: 100.53
TOTAL KILOS: 10 950

Arcelor Mittal Tubular Products Roman S.A. ArcelorMittal J27/99/91 ★★★★★★ România

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 16.09.2022

2204/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/4

B 26122/1

08.10.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
7.218 tons - lbs	169.59 meters - feets	15	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 168.30 x 10.97 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
7	T6/066-01/S355KL+20

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Bill:

Steel Grade: X52NO-PSL2
-

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
57432		Heat analysis		0.15	1.22	0.20	0.003	0.011	0.04	0.05	0.18	0.025	0.01	0.067	0.001	0.001	0.0005	0.0066
69781		Heat analysis		0.14	1.28	0.23	0.003	0.012	0.05	0.07	0.18	0.030	0.02	0.064	0.002	0.001	0.0003	0.0086
69783		Heat analysis		0.15	1.24	0.20	0.003	0.013	0.09	0.07	0.19	0.029	0.02	0.066	0.001	0.001	0.0003	0.0086
57432	22-879	Product analysis		0.15	1.24	0.20	0.003	0.009	0.05	0.05	0.18	0.028	0.02	0.065	0.001	0.001	0.0004	0.0068
57432	22-879	Product analysis		0.14	1.24	0.21	0.003	0.010	0.05	0.05	0.18	0.027	0.02	0.065	0.001	0.001	0.0004	0.0066
69781	22-879	Product analysis		0.14	1.27	0.22	0.002	0.011	0.05	0.06	0.18	0.031	0.02	0.063	0.002	0.001	0.0003	0.0082
69781	22-879	Product analysis		0.14	1.26	0.23	0.003	0.010	0.05	0.06	0.18	0.032	0.02	0.063	0.002	0.001	0.0003	0.0084
69783	22-879	Product analysis		0.15	1.25	0.22	0.003	0.012	0.08	0.07	0.18	0.031	0.02	0.064	0.002	0.001	0.0003	0.0083
69783	22-879	Product analysis		0.15	1.25	0.22	0.003	0.011	0.08	0.06	0.18	0.031	0.02	0.065	0.002	0.001	0.0003	0.0085

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/28/91 ★★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12-10.22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer:	MILL TEST CERTIFICATE	Page 2/4	ArcelorMittal
ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	according to EN 10204/3.2/2004 -	B 26122/1 08.10.2022	

Buyer:	PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 7.218 tons - lbs	Total Length: 169.59 meters - feets	Pieces 15	Bundles -
Buyer's reference	PO NO: 5279-22 REV 2	Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract	50005515	Dimensions: 168.30 x 10.97 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
7	T6/066-01/S355KL+20		205	-	20.5	5	

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
57432		Heat analysis		3.79	0.068	0.069	0.39
69781		Heat analysis		3.49	0.066	0.067	0.40
69783		Heat analysis		3.37	0.067	0.068	0.41
57432	22-879	Product analysis		4.12	0.066	0.067	0.40
57432	22-879	Product analysis		4.09	0.066	0.067	0.39
69781	22-879	Product analysis		3.78	0.065	0.066	0.39
69781	22-879	Product analysis		3.81	0.065	0.066	0.39
69783	22-879	Product analysis		3.73	0.066	0.067	0.41
69783	22-879	Product analysis		3.65	0.067	0.068	0.41

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
57432	Longitudinal Flat	50.8	-	40.00	-	11.20	-	448.0	-	22-3519	421.00	-	524.00	-	40.70	0.80
69781	Longitudinal Flat	50.8	-	40.00	-	11.80	-	472.0	-	22-3519	423.00	-	526.00	-	41.30	0.80
69783	Longitudinal Flat	50.8	-	40.00	-	12.00	-	480.0	-	22-3519	425.00	-	527.00	-	42.10	0.80

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative
12-10-22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS

2206/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 3/4 B 26122/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 7.218 tons - lbs	Total Length: 169.59 meters - feets	Pieces 15	Bundles -
Buyer's reference PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 168.30 x 10.97 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -	

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
7	T6/066-01/S355KL+20		205	-	20.5	5	

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
57432	22-5395	Transversal	10x7.5x55	0	-	147	136	140	20.0	141	-	-	-	95	95	95	1.30	1.20	1.24
69781	22-5395	Transversal	10x7.5x55	0	-	130	124	138	20.0	131	-	-	-	95	90	95	1.15	1.09	1.22
69783	22-5395	Transversal	10x7.5x55	0	-	122	131	142	20.0	132	-	-	-	90	95	95	1.08	1.15	1.26

Heat

Heat	Pieces	Length (m)	Weight (kg)
57432	3	-	-
69781	1	-	-
69783	11	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/91 ★★★★★★ România

Witnessed/Reviewed
Florin Hriscu

Inspector/Buyer representative

12-10-22

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

Formular 12A2, rev. 3

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** according to EN 10204/3.2/2004 -	Page 4/4 B 26122/1 08.10.2022	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 7.218 tons - lbs	Total Length: 169.59 meters - feets	Pieces 15	Bundles -
Buyer's reference: PO NO: 5279-22 REV 2	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;				
Contract 50005515	Dimensions: 168.30 x 10.97 mm -	Schedule: -	Length: 10.00 - 12.00 m -		- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -
7	T6/066-01/S355KL+20		205	-	20.5	5	

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, SC TMK RESITA SA Str. Lalescu Traian, 36, Caras-Severin, 320050, Reşiţa, Romania, AM HUNEDOARA Municipiul Hunedoara, DJ 687, Nr. 4,Judeţ Hunedoara, ROMANIA.
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. J27/30/91 România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

12.10.22

BUREAU VERITAS ROMANIA INDUSTRY & FACILITIES 20 PARIS 82

2208/ 3402

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 7

ITEM NO: T6/066-01/S355KL+20

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Witnessed/Reviewed
Florin Hriscu

BUREAU VERITAS ROMANIA 20 PARIS 62. INDUSTRY & FACILITIES

12-10-22

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
168.30	10.97	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-1-2159	69781	10.94	466
2	2-21-41-87	57432	11.49	489
3	2-21-41-62	57432	11.54	491
4	2-21-41-59	57432	11.47	488
5	2-21-51-55	69783	11.39	485
6	2-21-51-13	69783	11.56	492
7	2-21-51-22	69783	11.45	487
8	2-21-51-20	69783	11.45	487
9	2-21-51-53	69783	11.43	486
10	2-21-51-19	69783	11.48	489
11	2-21-51-10	69783	11.49	489
12	2-21-51-54	69783	11.32	482
13	2-21-51-11	69783	11.51	490
14	2-21-51-42	69783	10.95	466
15	2-21-51-29	69783	10.12	431

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal 327/68/91 ★★★★★★★ România

TOTAL NUMBER OF PIECES:	15
TOTAL METERS:	169.59
TOTAL KILOS:	7 218

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 08.10.2022

2209/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 1/3

B 26071/1

29.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
5.665 tons - lbs	115.02 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 219.10 x 9.53 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
9	T8/060-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43168K		Heat analysis		0.15	1.26	0.22	0.002	0.012	0.04	0.03	0.10	0.024	0.01	0.074	0.001	0.002	0.0001	0.0041
46074K		Heat analysis		0.14	1.30	0.22	0.002	0.013	0.05	0.04	0.11	0.026	0.01	0.073	0.005	0.002	0.0001	0.0081
43168K	22-848	Product analysis		0.14	1.24	0.21	0.002	0.011	0.04	0.03	0.10	0.026	0.01	0.072	0.001	0.002	0.0001	0.0045
43168K	22-848	Product analysis		0.14	1.25	0.21	0.002	0.010	0.04	0.03	0.10	0.027	0.01	0.073	0.001	0.002	0.0001	0.0044
46074K	22-848	Product analysis		0.14	1.27	0.21	0.002	0.011	0.04	0.04	0.10	0.028	0.01	0.071	0.003	0.002	0.0001	0.0077
46074K	22-848	Product analysis		0.14	1.28	0.20	0.002	0.011	0.04	0.04	0.10	0.028	0.01	0.071	0.003	0.002	0.0001	0.0079

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
43168K		Heat analysis		5.85	0.075	0.077	0.39
46074K		Heat analysis		3.21	0.078	0.080	0.40
43168K	22-848	Product analysis		5.78	0.073	0.075	0.38
43168K	22-848	Product analysis		6.14	0.074	0.076	0.38
46074K	22-848	Product analysis		3.64	0.074	0.076	0.39
46074K	22-848	Product analysis		3.54	0.074	0.076	0.39

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B

CE_S = C+Mn/6

CE$_{IIW}$ = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Inspector/Buyer representative
Witnessed/Reviewed
Florin Hriscu

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/29/93 ★★★★★★ România

BUREAU VERITAS ROMANIA PARIS 82 INDUSTRY & FACILITIES

12-10-22

Formular 12A2, rev. 3

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

Page 2/3

B 26071/1

29.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
5.665 tons - lbs	115.02 meters - feets	10	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 219.10 x 9.53 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
9	T8/060-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
43168K	Longitudinal Flat	50.8	-	40.00	-	9.90	-	396.0	-	22-3393	421.00	-	524.00	-	40.60	0.80
46074K	Longitudinal Flat	50.8	-	40.00	-	10.50	-	420.0	-	22-3393	424.00	-	528.00	-	41.20	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
43168K	22-5204	Transversal	10x7.5x55	0	-	143	133	126	20.0	134	-	-	-	95	95	90	1.26	1.17	1.11
46074K	22-5204	Transversal	10x7.5x55	0	-	131	137	124	20.0	131	-	-	-	95	95	90	1.15	1.21	1.09

Heat

Heat	Pieces	Length (m)	Weight (kg)
43168K	5	-	-
46074K	5	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Formular 12A2, rev. 3

ArcelorMittal Tubular Products Roman S.A. ArcelorMittal J27/88/93 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

12-10.22

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY		**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -					Page 3/3 **B 26071/1** **29.09.2022**		ArcelorMittal	
Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY		STANDARD SEAMLESS PIPES					Total weight: 5.665 tons - lbs	Total Length: 115.02 meters - feets	Pieces 10	Bundles -
		Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;								
Buyer's reference PO NO: 5279-22 REV 2		Dimensions: 219.10 x 9.53 mm -		Schedule: -			Length: 10.00 - 12.00 m -		-	
Contract 50005515									-	
Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X52NO-PSL2 -			
9	T8/060-01/S355KL0		205	-	20.5	5				

Remarks Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, Liberty OSTRAVA a.s Vratimovska 689/117, 719 00 Slezska Ostrava-Kuncice, Czechia.
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.

NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.

Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

ArcelorMittal Tubular Products Roman S.A. J27/88/93 ★★★★★ România

Witnessed/Reviewed
Florin Hriscu
Inspector/Buyer representative

BUREAU VERITAS ROMANIA 20 PARIS 82 INDUSTRY & FACILITIES

12.10.22

Formular 12A2, rev. 3

DETAILED PACKING LIST
P. O. NO. 50005515 ITEM - 9
ITEM NO: T8/060-01/S355KL0

Manufacturer: ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

Witnessed/Reviewed .
Florin Hriscu

Buyer: PROJECT MATERIALS GMBH
Schiessstr. 68,
40549 DUSSELDORF;
GERMANY

BUREAU VERITAS ROMANIA
PARIS
INDUSTRY & FACILITIES
17-10-22

(GOODS DESC): STANDARD SEAMLESS PIPES

BUYER PO NO: 5279-22 REV 2

OD(mm)	WT(mm)	STEEL GR.
219.10	9.53	X52NO

CRT NO	SERIAL NO	HEAT NO	LENGTH MTRS	WEIGHT KILOS
1	2-22-6-1174	43168K	11.74	578
2	2-22-6-1179	43168K	11.53	568
3	2-22-6-1175	43168K	11.81	582
4	2-22-6-1177	43168K	11.65	574
5	2-22-6-1178	43168K	11.21	552
6	2-22-37-2157	46074K	11.12	548
7	2-22-37-2178	46074K	11.78	580
8	2-22-37-2172	46074K	11.56	569
9	2-22-37-2294	46074K	11.44	563
10	2-22-37-2177	46074K	11.18	551

ArcelorMittal Tubular Products Roman S.A. România

TOTAL NUMBER OF PIECES:	**10**
TOTAL METERS:	**115.02**
TOTAL KILOS:	**5 665**

ARCELORMITTAL TUBULAR PRODUCTS ROMAN SA
DATE : 29.09.2022

2213/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
PM Piping	1722000931	122A10A	Q012202409

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec P.O.
According to the spc.----------

TMUGF Firma Data
MTSMD Signature Date
P. Ancarani 15/09/22

PAOLO ANCARANI
[X] REVIEW
[ ] WITNESS

CUSTOMER

Inspection No – Prüf-Nr - Certificat No – N° di collaudo Blatt-Nr. – Sheet No – Page-N° – Pag-N°: 1 of 1

DTM 1275109/1

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

CEOC INTERNATIONAL

Customer –Besteller –Acheteur –Committente:	Part – Teil –Partie – Parte:	**incomplete**
	Order No – Bestell-Nr. –N° de la commande – N° dell'ordine:	**1110026465**
Manufacturer – Hersteller –Fabricant – Produttore:	dated – vom –date – in data:	**31.10.2012**
Vallourec & Mannesmann Tubes V & M Deutschland GmbH, Düsseldorf	Works-No – Werks-Nr. – N° usine – Commessa N°:	**852/98453**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:
API Spec. 5 L, PSL 2, 10.2007, without API monogram, V&M-M-L14 Rev. 3 dated 12/2008 / EN 10225:2001 / BS 7191 : 1989 *

Material – Werkstoff –Matière – Materiale: according to – enstprechend –suivant – secondo: Edition – Ausgabe –Edizione:
X 52 N mod. / L 360M Mod. **requirements as above**

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:
Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:
Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore:

LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:
V&M41

Marking – Kennzeichung –Marquage – Punzonature:
see attached works test certificate.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article – Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pc.	**Hot Finished Seamless Line Pipes (Ends bevelled, angle 30 degrees)**		
3	-37-	**8 5/8 o.d. x 0,322 w.th. inches Total length: 473,46 m Total weight: 20.190 kg**	226746	28B, 29A
			226748	309B
			326514	1A, 301A

ITEM 160

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisisiti richiesti cone da allegati.

Location – Ort –Lieu – Localita **Dortmund**
*** / NACE Standard MR-0175-2003**

Date – Datum / Data **20 March 2013**

FOR THE SURVEYORS. G. MILKE
Surveyor to Lloyd's Register EMEA

A subsidiary of Lloyd's Register Group Limited
(CEOC Member Organisation)
Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:
Works test certificate no. 37824RS13.
1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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LLOYD'S REGISTER GROUP PAPER (01/2005)

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	V&M VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 1 / 7 Date: 27.02.2013

(A01) **V&M DEUTSCHLAND GmbH**	(A08.1) **V&M-Order-No.** 85298453 (A08.2) **Suborder**
(A06.1) Customer NICHT ERMITTELTE LAENDER	
(A06.2) **Orderer**	(A07.2) **Order-No.** 1110026465 **Date** 31.10.2012
(B01, B02, B04) **Description of the product**	LINE PIPE SEAMLESS IF POSSIBLE 12000 - 13000 MM ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH TUBES LOOSE TEST CONDITIONS AND FREQUENCY ACC. TO SPEC. V&M-M-L 14, REV. 3 DATED 12/2008 REPORT ELEMENTS: AL, B, N PER HEAT AND PRODUCT ANALYSIS API SPEC. 5 L, PSL 2, 10.2007 WITHOUT API MONOGRAM SPECIFICATION V&M-M-L14, REV. 3, DATED 12/2008 / EN 10225:2001 / BS 7191:1989 / NACE STANDARD MR 0175-2003 X 52 N MOD / L360N MOD. - GRADES S355G14+N AND S355G15+N ACC. TO EN 10225:2001 ARE COVERED UP TO 40 MM WALL THICKNESS. NORMALIZED CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES IN ACCORDANCE WITH BS 7191 355 EM CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES FULFIL THE REQUIREMENTS OF BS7191 GRADE 355EM WITHOUT TENSION TESTS IN PWHT-CONDITION AND WITHOUT WELDABILITY TESTS
(A10) **Inspection by** LLOYD´S REGISTER EMEA DTM 1275109	

(A13) **V&M Item**	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
3			O.D. 8 5/8 IN X WTH. 0,322 IN	IN RANDOM MILL LENGTH 11000 - 13000 MM

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 2 / 7 Date: 27.02.2013

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
3		37	473,46	20.190

LLOYD'S REGISTER NO. DTM

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V&M Item	Delivery Note-No	Packing list-No
3	57223	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	1.10	-	-	0.020	-	-	-	-
max	-	0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
226746	Oxygen (BOF)	0.130	0.340	1.50	0.015	0.0010	0.040	0.020	0.050	0.030	0.010
226748	Oxygen (BOF)	0.130	0.330	1.46	0.016	0.0010	0.037	0.020	0.050	0.030	0.010
326514	Oxygen (BOF)	0.130	0.330	1.48	0.012	0.0010	0.024	0.020	0.050	0.040	0.020

(B07.1) Heat	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %			
min	-	-	-	-	-	-	-	-	-			
max	0.060	0.020	0.040	0.0120	0.0005	.42	.25	0.50	0.12			
226746	0.050	0.005	0.032	0.0064	0.0003	.41	.23	0.11	0.09			
226748	0.050	0.004	0.033	0.0075	0.0002	.40	.22	0.11	0.09			
326514	0.050	0.004	0.037	0.0077	0.0003	.40	.23	0.13	0.09			

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

Heats fully killed

AL >= 2,2 X N

EF3 = V + NB MAX. 0,100%
HEAT NO. 226746
LADLE ANALYSIS = 0,082%

2217/ 3402

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 3 / 7 Date: 27.02.2013

(C71)

HEAT CHEMICAL ANALYSIS

CHECK ANALYSIS = 0,082%
CHECK ANALYSIS = 0,082%
EF3 = V + NB MAX. 0,100%
HEAT NO. 226748
LADLE ANALYSIS = 0,083%
CHECK ANALYSIS = 0,082%
CHECK ANALYSIS = 0,082%
EF3 = V + NB MAX. 0,100%
HEAT NO. 326514
LADLE ANALYSIS = 0,087%
CHECK ANALYSIS = 0,087%
CHECK ANALYSIS = 0,086%

LLOYD'S REGISTER NO. DTM
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(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.250	1.10	-	-	0.020	-	-	-	-
max		0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
226746	28B	0.127	0.337	1.47	0.016	0.0005	0.030	0.020	0.072	0.058	0.006
226746	29A	0.128	0.336	1.46	0.017	0.0005	0.024	0.023	0.083	0.071	0.008
226748	309B	0.129	0.325	1.49	0.017	0.0006	0.038	0.015	0.047	0.038	0.002
226748	309B	0.121	0.326	1.47	0.018	0.0006	0.038	0.015	0.048	0.038	0.001
326514	1A	0.130	0.326	1.45	0.013	0.0005	0.022	0.017	0.050	0.042	0.013
326514	301A	0.128	0.324	1.45	0.013	0.0005	0.023	0.016	0.050	0.042	0.013

(B07.1) Heat	(C00.1) Test Piece	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %	
min		-	-	-	-	-	-	-	-	-	
max		0.060	0.020	0.040	0.0120	0.0005	.42	.25	0.50	0.12	
226746	28B	0.051	0.002	0.031	0.0087	0.0001	.40	.22	0.16	0.08	
226746	29A	0.051	0.002	0.031	0.0080	0.0001	.41	.22	0.19	0.08	
226748	309B	0.051	0.002	0.031	0.0080	0.0001	.40	.22	0.10	0.08	
226748	309B	0.052	0.002	0.031	0.0087	0.0001	.39	.21	0.10	0.09	
326514	1A	0.052	0.002	0.034	0.0089	0.0001	.40	.22	0.12	0.09	
326514	301A	0.052	0.002	0.033	0.0083	0.0001	.40	.22	0.12	0.09	

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 4 / 7 Date: 27.02.2013

(C72)

PRODUCT CHEMICAL ANALYSIS

EF 02	EF = V + TI + NB

CHECK ANALYSIS PER HEAT

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TENSILE TEST RESULTS

Type (C10.1)	FLAT TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -	Z %				
min		-	360	490	25.5	-	-				
max		-	530	620	-	0.93	-				
226746	28B	38.27X08.43	411	552	30.5	0.74	71				
226748	309B	38.20X08.51	387	535	34.5	0.72	70				
326514	1A	38.25X08.70	394	544	36.0	0.72	71				
326514	301A	38.52X08.42	374	534	36.0	0.70	71				

TENSILE TEST RESULTS

Type (C10.1)	FLAT TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	ReH MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -	Z %				
min		-	358	490	20.0	-	-				
max		-	-	620	-	0.80	-				
226746	28B	20.06X08.35	398	549	26.5	0.72	68				
226748	309B	20.00X08.20	403	553	28.0	0.73	71				
326514	1A	19.98X08.55	404	548	28.5	0.74	73				
326514	301A	19.96X08.45	393	536	20.5	0.73	72				

MECHANICAL PROPERTIES CORRESPONDING TO 355 EM RESP. 355 EMZ
ACC. TO BS 7191 - 89
RING FLATTENING TEST ACC. TO ASTM A 530: SATISFACTORY
IMPACT TEST ON TRANSVERSE SPECIMENS, TYPE AND NUMBER OF 2219/ 3402

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	V&M VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 5 / 7 Date: 27.02.2013

TENSILE TEST RESULTS

SPECIMEN ACC. TO SPECIFICATION
IMPACT TEST ON LONGITUDINAL SPECIMENS,
TYPE AND NUMBER OF TEST COUPON ACC. TO DELIVERY CONDITIONS

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43 3) Mean					
		qcm	J	J	J	J					
min max		- -	27.0 -	27.0 -	27.0 -	38.0 -					
226746	28B	0.400	51,0	55,0	51,0	52,3					
226748	309B	0.400	52,0	57,0	67,0	58,6					
326514	1A	0.400	75,0	108	67,0	83,3					
326514	301A	0.400	95,0	94,0	58,0	82,3					

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42 1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min max		- -	19.0 -	19.0 -	19.0 -	25.0 -					
226746	28B	0.400	54,0	53,0	58,0	55,0					
226748	309B	0.400	42,0	52,0	40,0	44,6					
326514	1A	0.400	55,0	69,0	52,0	58,6					
326514	301A	0.400	48,0	84,0	89,0	73,6					

(D55)

OTHER TESTS ON PIPE

LLOYD'S REGISTER NO. DTM

1275109 / 1 2220/ 3402

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 6 / 7 Date: 27.02.2013

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT	NORMALIZED	5 MIN 920 DEGREES C AIR	
HYDROSTATIC TEST	202 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
FLATTENING TEST			SATISFACTORY
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
HARDNESS TEST		HRC MAX. 22	GUARANTEED
GRAIN SIZE	ASTM E 112, TABLE 1: 8 AND FINER		

ULTRASONIC TESTING FOR LONGITUDINAL DEFECTS ACC. TO
API 5 L, PSL 2, RECTANGULAR NOTCH (N5), LENGTH MAX. 50 MM
FLAW DEPTH 5% OF WALL THICKNESS, MIN. 0,4 MM, MAX. 1,5 MM,
AND EN 10246-7, ACCEPTANCE CLAUSE U3, SUB-CLASS C
RECTANGULAR NOTCH (N10), FLAW DEPTH 10% OF WALL THICKNESS,
INSIDE & OUTSIDE, FULL LENGTH, EACH PIPE/TUBE SATISFACTORY

(A04, B06)

MARKING, IDENTIFICATION

3

DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS MANUFACTURER'S MARK 8 5/8 X 0,322 TERMS OF DELIVERY PSL 2 X52N MOD /L360N MOD HEAT-NO. PROCESS OF MANUFACTURE SMLS N5 WA INSPECTORS BRAND LLOYDS PIPE NO. (TALLY-NR.) PAINT STENCILED ON ONE SIDE 8 5/8 X 0,322 219,1 X 8,179 TUBE/PIPE LENGTH FT TUBE/PIPE WEIGHT LBS 85298453 V&M ITEM-NO 3 PIPE NO. (TALLY-NR.) MANUFACTURER'S NAME

(Z01)

The supplied products are in compliance with the requirements of the order

LLOYD'S REGISTER NO. DTM
12751097 1

(A05, Z02, Z03, Z04)

Date	27.02.2013	11 MAR 2013
Validated by	Inspection Representative	Third Party Representative
	DOGAN	Lloyd's Register EMEA M. Mielke Business Centre Central Dortmund Lloyd's Register
☎	+49(0)2119603852	
🖷	+49(0)2119602216	
@	CERTIFICATES-RS-PLUG@VMTUBES.DE	

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 37824RS13 (A03) Page: 7 / 7 Date: 27.02.2013

Stamp	VALLOUREC & MANNESMANN TUBES V & M DEUTSCHLAND GmbH Werk Rath Abnahme - Vrakame Rather Kreuzweg 106 D-40472 Düsseldorf	

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

LLOYD'S REGISTER NO. DTM

1275109 / 1

V&M DEUTSCHLAND GmbH Work Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	TUBE/ PIPE LIST No. : 37824RS13 Page : 1 / 2 Date : 27.02.2013

Customer NICHT ERMITTELTE LAENDER Order-No. Item	V&M-Order No. 85298453 Item 3 Suborder	LLOYD'S REGISTER NO. DTM 1275109 / 1

Tally-No	Tube-No.	Heat	Test Piece	Single length M	Single length FT	Weight KG	Weight LBS
1	1	226748		12,440	40,814	534	1177
2	2	226746		12,460	40,879	530	1168
3	3	226746		12,690	41,634	542	1195
4	4	226746		12,640	41,470	542	1195
5	5	226746		12,840	42,126	542	1195
6	6	326514		12,960	42,520	556	1226
7	7	326514		12,960	42,520	554	1221
8	8	326514		12,950	42,487	552	1217
9	9	326514		12,950	42,487	550	1213
10	10	326514		12,670	41,568	542	1195
11	11	326514		12,150	39,862	522	1151
12	12	326514		12,710	41,699	540	1191
13	13	326514		12,400	40,682	528	1164
14	14	326514		12,310	40,387	518	1142
15	15	326514		12,960	42,520	556	1226
16	16	326514		12,960	42,520	558	1230
17	17	326514		12,960	42,520	550	1213
18	18	326514		12,960	42,520	556	1226
19	19	326514		12,960	42,520	554	1221
20	20	326514		12,910	42,356	548	1208
21	21	326514		12,910	42,356	548	1208
22	22	326514		12,970	42,552	554	1221
23	23	326514		12,950	42,487	550	1213
24	24	326514		12,960	42,520	550	1213
25	25	326514		12,960	42,520	558	1230
26	26	326514		12,960	42,520	558	1230
27	27	326514		12,970	42,552	552	1217
28	28	326514		12,970	42,552	564	1243
29	29	326514		12,950	42,487	556	1226
30	30	326514		12,960	42,520	548	1208
31	31	326514		12,780	41,929	544	1199
32	32	326514		12,800	41,995	546	1204
33	33	326514		12,960	42,520	548	1208
34	34	326514		12,800	41,995	544	1199

V&M DEUTSCHLAND GmbH Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	TUBE/ PIPE LIST No. : 37824RS13 Page : 2 / 2 Date : 27.02.2013

Tally-No	Tube-No.	Heat	Test Piece	Single length M	Single length FT	Weight KG	Weight LBS
35	35	326514		12,420	40,748	526	1160
36	36	326514		12,860	42,192	544	1199
37	37	326514		12,440	40,814	526	1160
Summary				473,460	1.553,350	20190	44512

LLOYD'S REGISTER NO. DTM

1275109/1

Copy

Inspection No – Prüf-Nr - Certificat No – N° di collaudo Blatt-Nr. – Sheet No – Page-N° – Pag-N°: 1 of 1 **DTM 1384341/3**

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

Customer – Besteller –Acheteur – Committente:	Part – Teil –Partie – Parte:	**complete**
	Order No – Bestell-Nr. –N° de la commande – N° dell'ordine	**1110039424**
Manufacturer – Hersteller –Fabricant – Produttore.	dated – vom –date – in data:	**22.04.2013**
Vallourec & Mannesmann Tubes V & M Deutschland GmbH, Düsseldorf	Works-No – Werks-Nr. – N° usine – Commessa N°:	**852/03411**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:

API Spec. 5 L, PSL 2, 12.2012, without API monogram, V&M-M-L14 Rev. 3 dated 12/2008 / EN 10225:2001 / BS 7191 : 1989 *

Material – Werkstoff –Matière – Materiale: according to – enstprechend –suivant – secondo: Edition – Ausgabe –Edizione:

X 52 N mod. / L 360N Mod. requirements as above

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:

Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:

Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore.

LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:

V&M41

Marking – Kennzeichung –Marquage – Punzonature:

see attached works test certificate.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pc.	**Hot Finished Seamless Line Pipes (Ends bevelled, angle 30 degrees)**		
3	**-18-**	**8 5/8 o.d. x 0,322 w.th. inches**	**379921**	**301A**
		Total length: 219,13 m Total weight: 9.306 kg		
			379968	**321A**

ITEM 160

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisisiti richiesti cone da allegati.

Location – Ort –Lieu – Localita **Dortmund**

*** / NACE Standard MR-0175-2003**

Date – Datum –Data **25 September 2013**

FOR THE SURVEYORS: A. SCHWARTZ
Surveyor to Lloyd's Register EMEA

A subsidiary of Lloyd's Register Group Limited (CEOC Member Organisation)
Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:

Works test certificate no. 45264R513.

1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES **Vallourec Group**	INSPECTION CERTIFICATE (A02) 3 2 EN 10204:2004 No. : 45264RS13 (A03) Page: 1 / 5 Date: 03.09.2013

(A01) **V&M DEUTSCHLAND GmbH**	(A08.1) **V&M-Order-No.** 85203411 (A08.2) **Suborder**
(A06.1) Customer NICHT ERMITTELTE LAENDER	
(A06.2) **Orderer**	(A07.2) **Order-No.** 1110039424 **Date** 22.04.2013

(B01, B02, B04) **Description of the product**	LINE PIPE SEAMLESS IF POSSIBLE 12000 - 13000 MM ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH TUBES LOOSE TEST CONDITIONS AND FREQUENCY ACC. TO SPEC. V&M-M-L 14, REV. 3 DATED 12/2008 REPORT ELEMENTS: AL, B, N PER HEAT AND PRODUCT ANALYSIS API SPEC. 5 L, PSL 2, 12.2012 WITHOUT API MONOGRAM SPECIFICATION V&M-M-L14, REV. 3, DATED 12/2008 / EN 10225:2001 / BS 7191:1989 / NACE STANDARD MR 0175-2003 X 52 N MOD / L360N MOD. - GRADES S355G14+N AND S355G15+N ACC. TO EN 10225:2001 ARE COVERED UP TO 40 MM WALL THICKNESS. NORMALIZED CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES IN ACCORDANCE WITH BS 7191 355 EM CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES FULFIL THE REQUIREMENTS OF BS7191 GRADE 355EM WITHOUT TENSION TESTS IN PWHT-CONDITION AND WITHOUT WELDABILITY TESTS

(A10)
Inspection by LLOYD'S REGISTER EMEA DTM 1384341

(A13) **V&M Item**	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
3			O.D. 8 5/8 IN X WTH. 0,322 IN	IN RANDOM MILL LENGTH 11000 - 13000 MM

0000018-00037/00042

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	 VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204 2004 No. : 45264RS13 (A03) Page: 2 / 5 Date: 03 09 2013

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
3		18	219,13	9.306

V&M Item	Delivery Note-No	Packing list-No
3	69752	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	1.10	-	-	0.020	-	-	-	-
max	-	0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
379921	Oxygen (BOF)	0.130	0.340	1.49	0.014	0.0010	0.034	0.020	0.050	0.030	0.010
379968	Oxygen (BOF)	0.130	0.330	1.45	0.012	0.0010	0.029	0.030	0.060	0.040	0.010

(B07.1) Heat	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %			
min	-	-	-	-	-	-	-	-	-			
max	0.060	0.020	0.040	0.0120	0.0005	.42	.25	0.50	0.12			
379921	0.050	0.005	0.034	0.0069	0.0003	.40	.23	0.11	0.09			
379968	0.050	0.005	0.033	0.0058	0.0003	.40	.23	0.14	0.09			

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

Heats fully killed

AL >= 2,2 X N
CHECK ANALYSIS PER HEAT

EF 3. V + NB = MAX. 0,100%
HEAT NO.: 379921
LADLE ANALYSIS: 0,084%
CHECK ANALYSIS: 0,088%

LLOYD'S REGISTER EMEA LTM
13643411 / 3

2227/3402

0000018-00038/00042

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 45264RS13 (A03) Page: 3 / 5 Date: 03.09.2013

(C71)

HEAT CHEMICAL ANALYSIS

CHECK ANALYSIS: 0,089%
EF 3: V + NB = MAX. 0,100%
HEAT NO.: 379968
LADLE ANALYSIS: 0,083%
CHECK ANALYSIS: 0,083%
CHECK ANALYSIS: 0,082%

TENSILE TEST RESULTS

Type (C10.1)	FLAT TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -	Z %				
min		-	360	490	27.0	-	-				
max		-	530	620	-	0.93	-				
379921	301A	38.20X07.98	395	546	34.0	0.72	67				
379968	321A	38.11X08.39	369	525	36.5	0.70	59				

TENSILE TEST RESULTS

Type (C10.1)	FLAT TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	transverse

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	ReH MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -	Z %				
min		-	358	490	20.0	-	-				
max		-	-	620	-	0.80	-				
379921	301A	19.97X08.12	382	535	29.5	0.71	73				
379968	321A	19.93X08.23	360	525	28.5	0.69	70				

MECHANICAL PROPERTIES CORRESPONDING TO 355 EM RESP. 355 EMZ
ACC. TO BS 7191 - 89
RING FLATTENING TEST ACC. TO ASTM A 530: SATISFACTORY
IMPACT TEST ON TRANSVERSE SPECIMENS, TYPE AND NUMBER OF
SPECIMEN ACC. TO SPECIFICATION
IMPACT TEST ON LONGITUDINAL SPECIMENS,

LLOYD'S RE[illegible] DTM
13843417/3

0000018-00039/00042

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 45264RS13 (A03) Page: 4 / 5 Date: 03.09.2013

TENSILE TEST RESULTS

TYPE AND NUMBER OF TEST COUPON ACC. TO DELIVERY CONDITIONS

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	27.0	27.0	27.0	38.0					
max		-	-	-	-	-					
379921	301A	0.400	104	97,0	70,0	90,3					
379968	321A	0.400	111	71,0	108	96,6					

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

LLOYD'S REGISTER NO. DTM 13843413

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	19.0	19.0	19.0	25.0					
max		-	-	-	-	-					
379921	301A	0.400	51,0	58,0	66,0	58,3					
379968	321A	0.400	99,0	106	101	102					

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT	NORMALIZED	5 MIN 920 DEGREES C AIR	
HYDROSTATIC TEST	207 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
FLATTENING TEST			SATISFACTORY
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
HARDNESS TEST		HRC MAX. 22	GUARANTEED
GRAIN SIZE	ASTM E 112, TABLE 1; 8 AND FINER		2229/ 3402

0000018-0004000042

V&M DEUTSCHLAND GmbH (A01) Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 45264RS13 (A03) Page: 5 / 5 Date: 03.09.2013

(D55)

OTHER TESTS ON PIPE

ULTRASONIC TESTING FOR LONGITUDINAL DEFECTS ACC. TO
API 5 L, PSL 2, RECTANGULAR NOTCH (N5), LENGTH MAX. 50 MM
FLAW DEPTH 5% OF WALL THICKNESS, MIN. 0,4 MM, MAX. 1,5 MM,
AND EN 10246-7, ACCEPTANCE CLAUSE U3, SUB-CLASS C
RECTANGULAR NOTCH (N10), FLAW DEPTH 10% OF WALL THICKNESS,
INSIDE & OUTSIDE, FULL LENGTH, EACH PIPE/TUBE SATISFACTORY

(A04, B06)

MARKING, IDENTIFICATION

3

DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS MANUFACTURER'S MARK 8 5/8 X 0,322 TERMS OF DELIVERY PSL 2 X52N MOD /L360N MOD HEAT-NO. PROCESS OF MANUFACTURE SMLS N5 WA INSPECTORS BRAND LR DTM MM PIPE NO. (TALLY-NR.) PAINT STENCILED ON ONE SIDE 8 5/8 X 0,322 219,1 X 8,179 TUBE/PIPE LENGTH FT TUBE/PIPE WEIGHT LBS 85203411 V&M ITEM-NO 3 PIPE NO. (TALLY-NR.) MANUFACTURER'S NAME

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	03.09.2013	11 SEP 2013
Validated by	Inspection Representative	Third Party Representative
	DOGAN	Lloyd's Register EMEA M. Mielke Business Centre South West Dortmund Lloyd's Register
☎	+49(0)2119603852	
🖷	+49(0)2119602216	
@	CERTIFICATES-RS-PLUG@VMTUBES.DE	
Stamp	VALLOUREC & MANNESMANN TUBES V&M DEUTSCHLAND GmbH Werk Rath Abteilung Abnahme	

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

LLOYD'S REGISTER NO. DTM
1 3 8 4 3 4 1 / 3

0000018-00041/00042

V&M DEUTSCHLAND GmbH Werk Rath-Stopfen Rather Kreuzweg 106 40472 Düsseldorf	VALLOUREC & MANNESMANN TUBES Vallourec Group	TUBE/ PIPE LIST No. : 45264RS13 Page : 1 / 1 Date : 03.09.2013

Customer NICHT ERMITTELTE LAENDER Order-No. Item	V&M-Order No. 85203411 Item 3 Suborder

Tally-No	Tube-No.	Heat	Test Place	Single length M	Single length FT	Weight KG	Weight LBS
1	1	379968		12,120	39,764	518	1142
2	2	379968		12,700	41,667	540	1191
3	3	379968		11,930	39,140	512	1129
4	4	379968		12,800	41,995	544	1199
5	5	379968		12,700	41,667	540	1191
6	6	379921		11,450	37,566	516	1138
7	7	379921		12,390	40,650	516	1138
8	8	379921		12,200	40,026	514	1133
9	9	379921		12,360	40,551	500	1102
10	10	379921		11,020	36,155	472	1041
12	12	379921		11,930	39,140	514	1133
13	13	379921		11,650	38,222	518	1142
14	14	379921		11,620	38,123	516	1138
15	15	379921		12,410	40,715	524	1155
16	16	379921		12,430	40,781	508	1120
17	17	379921		12,210	40,059	516	1138
18	18	379921		12,840	42,126	520	1146
19	19	379921		12,370	40,584	518	1142
Summary				219,130	718,931	9306	20518

LLOYD'S REGISTER NO. DTM

1 3 8 4 3 4 1 / 3

0000018-00042/00042

Tenaris

SILCOTUB S.A.
ZALAU, ROMANIA
tel. 0040 260 526720
fax 0040 260 661661

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: 02/15/12266 | Page / Seite: 1 / 9

Date / Datum: May 29, 2015

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.		36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 36475,4 lb 1030.39 mt 16545 kg	10.77 lb/ft 16.03 Kg/m

DELIVERY NOTES / LIEFERSCHEINE

Delivery Notes / Lieferscheine	Delivery Notes / Lieferscheine
Job number: 0031122949 / 000010 Shipping note: Address:	Town: Country:

ITEM 990

TENSILE TEST / ZUGVERSUCH

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Specimen condition / Probenform				Specimen dimensions / Probengroesse		Test temp / entemp	Y.S. OffSet 0.2%	U.T.S. Req.	Y.S./U.T.S	Elongation / Bruchdehnung			
		Ls	Sc	Type / Typ	Ori	Size / abmessung	Area / Flaeche		Min: 355.00 Max: --	Min: 460.00 Max: 620.00	Req. Max. 0.88	Lo 5D = 5.65√So	Min.	Min.	Obt.
						mm	mm2	°C	N/MM2	N/MM2		cal.	mm	%	%
750017	K9652/F	B	N	Ss	L	20.01 x 6.08	122,40	+20	436.00	560.00	0.78	5D	65.0	22.0%	31.0%
750017	K9654/F	B	N	Ss	L	20.02 x 5.98	120,40	+20	441.00	562.00	0.78	5D	60.0	22.0%	33.0%

Lloyd's Register (Romania) SRL
Evdharnet Office
Lloyd's Register
I. Bildea
Witnessed
29.05.15

B: Body / Koerper	Max: Maximum / Maximal	Ori: Orientation / Richtung	Ss: Strip specimen / Streifenprobe
L: Longitudinal / Laengs	Min: Minimum / Minimal	Req. Max: Required maximum / gef. Hoechstwert	U.T.S: Ultimate Tensile Strength / Aeusserste
Lo: Initial length / Anfangslaenge	N: Normalized / Normalisiert	Req: Required / Gefordert	Streckgrenze
Ls: Location of sample / Probenentnahme	Obt: Obtained / Erhalten	Sc: Specimen condition / Probenzustand	Y.S: Yield Strength / Streckgrenze

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INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: 02/15/12266 | Page / Seite: 2 / 9

Date / Datum: May 29, 2015

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921	.	2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz	Nominal Weight / Theor. Gewicht:
o 4.500" O.D. x .236" W.T. o 114.3mm O.D. x 6mm W.T.	. .	36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 36475,4 lb 1030,39 mt 16545 kg	10.77 lb/ft 16.03 Kg/m

TENSILE TEST / ZUGVERSUCH

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Specimen condition / Probenform Ls	Sc	Type / Typ	Ori	Specimen dimensions / Probengroesse Size / abmessung	Area / Flaeche	Test temp / entemp.	Y.S. EUL 0.5%	U.T.S. Req.	Y.S./U.T.S	Elongation / Bruchdehnung Lo	Min.	Min.	Obt.
									Min: 360 Max: 530	Min: 460 Max: 760	Req. Max. 0.93				
						mm	mm2	°C	MPa	MPa		cal.	mm	%	%
750017	K9653/F	B	N	Ss	L	25.42 x 5,96	152,90	+20	450	563	0,80	2"	50.0	21.0%	35.0%
750017	K9655/F	B	N	Ss	L	25.44 x 6,06	155,60	+20	448	566	0.79	2"	50.0	21.0%	35.0%

B: Body / Koerper	Max: Maximum / Maximal	Ori: Orientation / Richtung	Ss: Strip specimen / Streifenprobe
L: Longitudinal / Laengs	Min: Minimum / Minimal	Req. Max: Required maximum / gef. Hoechstwert	U.T.S: Ultimate Tensile Strength / Aeusserste Streckgrenze
Lo: Initial length / Anfangslaenge	N: Normalized / Normalisiert	Req: Required / Gefordert	Y.S: Yield Strength / Streckgrenze
Ls: Location of sample / Probenentnahme	Obt: Obtained / Erhalten	Sc: Specimen condition / Probenzustand	

CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

Composition % / Zusammensetzung %

Heat N° / Charge Nr.	Sample N° / Probe Nr.			C (x100)	Mn (x100)	Si (x100)	Ni (x100)	Cr (x100)	Mo (x100)	V (x100)	Cu (x100)	Ce LF (x100)	F1 (x100)	F2 (x100)	F3 (x100)	F4 (x100)	F5 (x100)	P (x1000)	S (x1000)	Sn (x1000)	Al (x1000)	Ti (x1000)	Nb (x1000)	As (x1000)	N (x10000)	B (x10000)	Sb (x10000)	Pb (x10000)	Bi (x10000)	Ca (x10000)
		H	Max	16	160	45	30	25	8	10	35	43	80	10	12	43	25	25	7	20	60	20	50	20	140	5	100	100	100	50
			Min	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		P	Max	16	160	45	30	25	8	10	35	43	80	10	12	43	25	25	7	20	60	20	50	20	140	5	100	100	100	50
			Min	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
750017		H		14	125	27	10	11	5	7	12	41	38	8,8	9.2	40,9	23,7	9	2	10	26	4	18	8	83	4	17	5	1	20

Lloyd's Register (Romania) S.R.L.
Bucharest Office
Witnessed
Reviewed 29.05.15

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INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer:	Page / Seite:
02/15/12266	3 / 9
Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.	.	36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 36475,4 lb 1030.39 mt 16545 kg	10.77 lb/ft 16.03 Kg/m

CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

Composition % / Zusammensetzung %

Heat N° / Charge Nr.	Sample N° / Probe Nr.		C (X 100)	Mn (X 100)	Si (X 100)	Ni (X 100)	Cr (X 100)	Mo (X 100)	V (X 100)	Cu (X 100)	Ce LF (X 100)	F1 (X 100)	F2 (X 100)	F3 (X 100)	F4 (X 100)	F5 (X 100)	P (X 1000)	S (X 1000)	Sn (X 1000)	Al (X 1000)	Ti (X 1000)	Nb (X 1000)	As (X 1000)	N (X 10000)	B (X 10000)	Sb (X 10000)	Pb (X 10000)	Bi (X 10000)	Ca (X 10000)
		H Max	16	160	45	30	25	8	10	35	43	80	10	12	43	25	25	7	20	60	20	50	20	140	5	100	100	100	50
		Min	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		P Max	16	160	45	30	25	8	10	35	43	80	10	12	43	25	25	7	20	60	20	50	20	140	5	100	100	100	50
		Min	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
750017	K9392/L	P	14	126	28	11	11	4	7	13	41	39	8,8	9	41	23,8	8	1	11	32	2	18	6	78	4	19	10	10	17
750017	K9652/F	P	13	125	27	12	12	4	7	13	40	41	8,7	8,9	40,1	22,8	8	1	10	31	2	17	6	61	4	15	6	6	20
750017	K9653/F	P	14	126	28	12	12	4	7	13	41	41	8,8	9	41,3	23,6	9	1	10	31	2	18	6	61	4	18	8	7	18

Ce LF: C+Mn/5+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Cr+Mo+Ni+Cu)
F2: (Nb+V)
F3: (Nb+V +Ti)
F4: (C +(Mn/6)+((Cr+Mo+V)/5)+((Ni+Cu)/15))
F5: C +Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V /10+(5*B)
H: Heat / Charge
Max: Maximum / Maximal
Min: Minimum / Minimal
P: Product /Produkt

THROUGH WALL HARDNESS / HAERTE IN DER WANDSTAERKE

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Required values / Geforderte Werte	Individuals / Einzel: Min: -- Max: 248.0 Var: --	Average / Durchschnitt: Min: -- Max: -- Var: --	Hardness type / Haertetyp: vickers; Minimum martensite / Minimum Martensit : (%): --	Formula applied / Angewendete Formel
		Specimen condition: Ls	Sc	Quad.	Scale / Skala	OD: 1	2	3	Dist. (mm)	Avg.	MW: 1	2	3	Avg.	ID: 1	2	3	Dist. (mm)	Avg.	Var.
750017	K9652/F	B	N	1	HV10	172,0	173,0	174,0	-2	173,0	171,0	172,0	168,0	170,3	174,0	175,0	172,0	2	173,7	3,0
750017	K9652/F	B	N	2	HV10	172,0	174,0	173,0	-2	173,0	173,0	172,0	171,0	172,0	174,0	171,0	171,0	2	172,0	1,0
750017	K9652/F	B	N	3	HV10	174,0	172,0	173,0	-2	173,0	173,0	174,0	173,0	173,3	173,0	174,0	172,0	2	173,0	--

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Lloyd's Register (Romania) SRL
Authorised Office
Lloyd's Register
Witnessed 29.05.15

SILCOTUB S.A.

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: 02/15/12266 | Page / Seite: 4 / 9

Date / Datum: May 29, 2015

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.	. .	36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 36475,4 lb 1030.39 mt 16545 kg	10.77 lb/ft 16.03 Kg/m

THROUGH WALL HARDNESS / HAERTE IN DER WANDSTAERKE

Required values / Geforderte Werte		Individuals / Einzel: Min: –	Max: 248,0	Var: –	Average / Durchschnitt: Min: –	Max: –	Var: –	Hardness type / Haertetyp: vickers	Minimum martensite / Minimum Martensit: (%): –	Formula applied / Angewendete Formel											
Heat N° / Charge Nr.	Sample N° / Probe Nr.	Specimen condition: Ls	Sc	Quad.	Scale / Skala	OD: 1	2	3	Dist. (mm)	Avg.	MW: 1	2	3	Avg.	ID: 1	2	3	Dist. (mm)	Avg.	Var.
750017	K9652/F	B	N	4	HV10	174,0	173,0	172,0	-2	173,0	168,0	171,0	170,0	169,7	172,0	174,0	176,0	2	174,0	4,0
750017	K9654/F	B	N	1	HV10	166,0	167,0	167,0	-2	166,7	168,0	168,0	168,0	168,0	166,0	168,0	167,0	2	167,0	1,0
750017	K9654/F	B	N	2	HV10	169,0	167,0	173,0	-2	169,7	168,0	166,0	165,0	166,3	171,0	171,0	174,0	2	172,0	6,0
750017	K9654/F	B	N	3	HV10	168,0	173,0	170,0	-2	170,3	173,0	172,0	173,0	172,7	174,0	169,0	174,0	2	172,3	2,0
750017	K9654/F	B	N	4	HV10	177,0	182,0	177,0	-2	178,7	176,0	174,0	173,0	174,3	173,0	165,0	166,0	2	168,0	11,0

Avg: Average / Durchschnitt
B: Body / Koerper
Dist: Distance from outer diameter / Abstand zum aeusseren Durchmesser
ID: Internal Diameter / Innendurchmesser
Ls: Location of sample / Probenentnahme
Max: Maximum / Maximal
Min: Minimum / Minimal
MW: Middle Wall / Mitte wand
N: Normalized / Normalisiert
OD: Outside Diameter / Aussendurchmesser
Quad: Quadrant / Quadrant
Sc: Specimen condition / Probenzustand
Var: Variation / Abweichung

IMPACT TEST / KERBSCHLAGPROBE

Type/Typ: ISOV			Orientation/Richtung: L			Unit / Einheit: JOULE				Shear area / Scherbereich %			
Position/Position:			Temp: -50		Unit/Einheit: °C	Ind.Min.Req: 20		Req.Min.Avg: 28		Ind.Min.Req: –		Req.Min.Avg: –	
Heat N° / Charge Nr.	Sample N° / Probe Nr.	Zone / Zone	Ls	Sc	Size / Abmessung: mm	Results / Ergebnis: 1	2	3	Avg.	Results / Ergebnis: 1	2	3	Avg.
750017	K9652/F	outside	B	N	10 x 5,00	63,0	52,0	91,0	69,0	100	100	100	100
750017	K9654/F	outside	B	N	10 x 5,00	96,0	98,0	92,0	95,0	100	100	100	100

Lloyd's Register
Witnessed
Reviewed
29.05.15

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SILCOTUB S.A.
[illegible]
ROMANIA
[illegible]

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer:	Page / Seite:
02/15/12266	5 / 9
Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921	.	2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz		Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.	.	36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 1030.39 mt	36475,4 lb 16545 kg	10.77 lb/ft 16.03 Kg/m

IMPACT TEST / KERBSCHLAGPROBE

Avg: Average / Mittelwert	mindestens gef. Einzelwert	N: Normalized / Normalisiert	Sc: Specimen condition / Probenzustand
B: Body / Koerper	L: Longitudinal / Laengs	Req. Min. Avg: Required minimum average /	Temp: Temperature / Temperatur
Ind. Min. Req: Individual Minimum Required /	Ls: Location of sample / Probenentnahme	mindestens gef. Mittelwert	

Lloyd's Register (Romania) SRL
Bucharest Office
Lloyd's Register
T. Silden
☒ Witnessed
☐ Reviewed
29.05.15

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ROMANIA

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer:	Page / Seite:
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Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

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ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.		36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 36475,4 lb 1030.39 mt 16545 kg	10.77 lb/ft 16.03 Kg/m

HYDROSTATIC TEST / WASSERDRUCKPROBE

Pressure / Druck		Time / Zeit	Results / Ergebnis
Unit / Einheit.	Value / Wert	Seconds / Sekunden	
mpa	20,5	5	Satisfactory / Zufriedenstellend

Lloyd's Register Romania S.R.L.
Bucharest Office
Lloyd's Register
Witnessed
Verified 24.05.15

SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

STANDARD EDITIONS AUSGABE NACH	
Standard:API 5L Year:2012 Revision:Ed... Revision year:45th Standard:EN 10225 Year:2009 Standard:NACE MR0175/ISO 15156 Year:2009	Standard:API 5L Jahr:2012 Neuausgabe:Ed... Neuausgaben-Jahr:45th Standard:EN 10225 Jahr:2009 Standard:NACE MR0175/ISO 15156 Jahr:2009

PRODUCT DESCRIPTION NOTES PRODUKT-BESCHREIBUNGS-ANMERKUNGEN	
Note 1 is the full description of the 'Product type' SEAMLESS HOT FINISHED ROUND PROFILES FOR METALLIC CONSTRUCTION (WITH EXTRA REQUIREMENTS) Note 2 is the full description of the 'Surface' INTERNALLY BARE, EXTERNALLY VARNISHED WITH INCOLOR LACQUER.	Anmerkung 1 ist die volle Beschreibung der 'Art des Produkts' NAHTLOSE HOHLPROFILE WARMGEFERTIGT FUER BAUKONSTRUKTIONEN (KEIN STANDARD PRODUKT) Anmerkung 2 ist die volle Beschreibung der 'Oberfläche' INNEN ROH, AUSSEN GEOELT WITH INCOLOR LACQUER.

Supplementary Information Zusaetzliche Informationen	
Quantity detail for heat: please see tally-list	Quantity detail for heat: please see tally-list

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Number / Nummer:	Page / Seite:
02/15/12266	7 / 9
Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz		Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T. ø 114.3mm O.D. x 6mm W.T.		36.089 ft ÷ 42.651 ft 11000 mm ÷ 13000 mm	3380'07" ft 1030.39 mt	36475,4 lb 16545 kg	10.77 lb/ft 16.03 Kg/m

SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

Supplementary Information Zusaetzliche Informationen	
NONDESTRUCTIVE TEST(EDDY CURRENT)ACC.TO ISO 10893-1+ ISO 10893-2,E3H hole diameter 2,0 mm max.:WITHOUT OBJECTIONS NONDESTRUCTIVE TEST (EMI.) ACC. TO ISO 10893-3: WITHOUT OBJECTIONS NONDESTRUCTIVE TEST U.T. ACC.TO ASTM A213; ISO 10893-10 . U2/C for long./transv.OD/ID defects; ISO 10893-8 LAMINATIONS U3: WITHOUT OBJECTIONS AFTER UT INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF HEAT TREATMENT: NORMALIZED SILCOTUB CONFORMS COMPLIANCE WITH CHEMICAL COMPOZITION AND MECHANICAL PROPERTIES ACCORDING MDS-Y22/Y27 WITHOUT CTOD TEST MATERIAL ACCORDING TO NACE MR 01-75/ ISO 15156-2 A.2.1.2 WE GUARANTEE THAT THE MATERIAL HAVE AUSTENITIC GRAIN SIZE 5 OR FINER ACCORDING TO ASTM E 112 MARKING: _TENARIS SL_API SPEC 5L_"5L-0245"__MONOG API_DATA(L/AN) _114,3 x 6 _X52N PSL2 _SMLS_HEAT NO.__20,5 MPA_L TEAVA[m,2]_ _:_EN 10225_S355G14+N/S355G15+N_US LEVEL (N5)_PIPE NO:_ _TPI LR_45000 00921 _ _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	ZERSTOHRUNGSFREIE INSPEKTION NACH ISO 10893-1+ISO 10893-2 E3H, hole diameter 2,0 mm max.: WURDE OHNE BEANSTANDUNGEN DURCHGEFUHRT ZERSTOHRUNGSFREIE INSPEKTION NACH ISO 10893-3: WURDE OHNE BEANSTANDUNGEN DURCHGEFUHRT ZERSTOHRUNGSFREIE INSPEKTION (UT) NACH ASTM A 213;ISO 10893-10,U2C, for long / transv. OD/ID defects; ISO 10893-8, LAMINATIONS U3: WURDE OHNE BEANSTANDUNGEN DURCHGEFUHRT AFTER UT INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF HEAT TREATMENT: NORMALIZED SILCOTUB CONFORMS COMPLIANCE WITH CHEMICAL COMPOZITION AND MECHANICAL PROPERTIES ACCORDING MDS-Y22/Y27 WITHOUT CTOD TEST MATERIAL ACCORDING TO NACE MR 01-75/ ISO 15156-2 A.2.1.2 WE GUARANTEE THAT THE MATERIAL HAVE AUSTENITIC GRAIN SIZE 5 OR FINER ACCORDING TO ASTM E 112 MARKING: _TENARIS SL_API SPEC 5L_"5L-0245"__MONOG API_DATA(L/AN) _114,3 x 6 _X52N PSL2 _SMLS_HEAT NO.__20,5 MPA_L TEAVA[m,2] _:_EN 10225_S355G14+N/S355G15+N_US LEVEL (N5)_PIPE NO:_ _TPI LR_45000 00921 _ _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ BESICHTIGUNG UND MASSKONTROLLE WURDE OHNE BEANSTANDUNGEN DURCHGEFUHRT BERUHIGTER STAHL, AUS FEINKORN; IM ELEKTROOFEN GEFERTIGT

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Southeast Office Mamaia
Lloyd's Register
L. Bilden
☒ Witnessed
☐ Reviewed
29.05.15

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Number / Nummer:	Page / Seite:
02/15/12266	8 / 9
Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921		2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 88Pcs/Pz		Nominal Weight / Theor. Gewicht:
ø 4.500" O.D. x .236" W.T.	-	36.089 ft ÷ 42.651 ft	3380'07" ft	36475,4 lb	10.77 lb/ft
ø 114.3mm O.D. x 6mm W.T.	-	11000 mm ÷ 13000 mm	1030.39 mt	16545 kg	16.03 Kg/m

SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

Supplementary Information Zusaetzliche Informationen	
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. Tenaris IT identification number for MTC: 56ƒi%,pz	DAS GELIEFERTE MATERIAL ENTSPRICHT BESTELLVORSCHRIFTEN. Tenaris IT-Identifikationsnummer für MTC: 56ƒi%,pz

MARKING / MARKIERUNG

Marking Markierung	
STENCILING _POANSONARE LA 1 CAPAT IN INTERVALUL 50-150[mm]: _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ C:2290073/001 _4500000921 _ LEGEND _API = API Logo	LACKIERUNG _POANSONARE LA 1 CAPAT IN INTERVALUL 50-150[mm]: _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ C:2290073/001 _4500000921 _ HINWEISTEXT _API = Logo API
PUNCHING _POANSONARE LA 1 CAPAT IN INTERVALUL 50-150[mm]: _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ LEGEND _API = API Logo	VORGESCHRIEBENEN _POANSONARE LA 1 CAPAT IN INTERVALUL 50-150[mm]: _API SPEC 5L_X52N PSL2 _EN 10225_S355G14+N/S355G15+N_ _HEAT NO_ HINWEISTEXT _API = Logo API

Bureau Veritas Romania SRL
Bucharest Office
Lloyd's Register
Witness
Witnessed
Reviewed
29.05.15

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Dieses Zeugnis wird mittels eines Computersystems erstellt und ist mit elektronischer Unterschrift gueltig. Das Originalattest ist durch das Tenaris Logo in gruener Farbe gekennzeichnet. Beim Erstellen einer Kopie des Originalattests, muss der Eigentuemer des Zeugnisses sicherstellen, dass die Kopie dem Original entspricht und die Verantwortung fuer eine unsachgemaesse oder unrechtliche Benutzung uebernehmen. Jegliche Aenderung oder Faelschung kann strafrechtlich verfolgt werden.

FOR03171

SILCOTUB S.A.
ROMANIA

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer:	Page / Seite:
02/15/12266	9 / 9
Date / Datum: May 29, 2015	

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	4500000921	.	2290073/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
NORMALIZED NORMALGEGLUEHT	See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
ACC.TO THE NORM API 5L PSL2 45TH ED. , EN 10225:2009 + TQ 20030609 V3.2 SPEZ. NORM API 5L PSL2 45 ED. , EN 10225:2009 + TQ 20030609 V3.2	STEEL GR. X52 N /S355G14+N/S355G15+N STAHL GR. X52 N /S355G14+N/S355G15+N	BEVEL API 5L / ISO 3183 AJ 2429-4 MIT FASE GEM. API 5L / ISO 3183 AJ 2429-4

Dimensions / Abmessung:	Schedule / Schedule	Length / Laenge :	Quantity / Menge: 88Pcs/Pz		Nominal Weight / Theor. Gewicht:
o 4.500" O.D. x .236" W.T.	.	36.089 ft ÷ 42.651 ft	3380'07" ft	36475,4 lb	10.77 lb/ft
o 114.3mm O.D. x 6mm W.T.	.	11000 mm ÷ 13000 mm	1030.39 mt	16545 kg	16.03 Kg/m

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Hiermit wird bestaetigt, dass das im Attest beschriebene Material gemaess der Anforderungen der Bestellung hergestellt, geprueft und abgenommen wurde. Dieses Attest ist keine Ursprungserklaerung und kann nicht als solche verwendet werden.

	CUSTOMER THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
	INSPECTION COMPANY ABNAHMEGESELLSCHAFT	QUALITY CERTIFICATION DEPT. QUALITAETS- UND ZEUGNISABTEILUNG PUSCAS Daniela	QUALITY REGIONAL MANAGER VERANTWORTLICHER QUALITATSWEN MORENT Laszlo

Lloyd's Register
Witnessed
Reviewed
29.05.15

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

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FOR03171

TUBOS REUNIDOS INDUSTRIAL, S.L.U
Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.2

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

THE BILLETS AND THE MATERIAL COVERED BY THIS CERTIFICATE ARE MANUFACTURED AT OUR STEEL PLANT IN AMURRIO, SPAIN.

Nº 0000350262/0 Rev. 002

CLIENTE: CUSTOMER		PEDIDO / PARTIDA: P.ORDER / ITEM	436000-1 004.
PRODUCTO: ARTICLE	TUBERÍA SIN SOLDADURA LAMINADA EN CALIENTE HOT FINISHED SEAMLESS TUBES	CLI. MATERIAL: CLIENT MATERIAL	11402500
EXTREMOS: ENDS	BISELADOS BEVELLED ENDS	REF. FABRICA: WORK ORDER	300020433 000040
NORMA / GRADO: APL.STANDARD AND GRADE	API 5L 46TH ED./ISO 3183:2012 PSL2; EN10225:2009 360NO/X52NO; S355G14/G15+N	PROTECCIÓN SUPERF: EXT. COATING	LACA EXTERIOR EXTERNALLY DRY LACQUERED
		DIMENSIONAL STD:	API 5L PSL2
ESPEC. ADICIONALES: ADITIONAL SPECS.	NACE MR0175/ISO 15156 ED. 2015	PROCESO FUSION: MELTING PROCESS	HORNO ELECTRICO ACERO TOTALMENTE CALMADO ELECTRIC FURNACE // FULLY KILLED
FAB. DE PALANQUILLA: BILLETS MANUFACTURE	COLADA CONTINUA CONTINUOUS CASTING		
DIMENSIONES: DIMENSIONS	114,3 X 8,56 MM. X 8-11,8 M.		
MARCAS: MARKING	ESTAMPADO: DIE STAMPING	TRI (SELLO API) L360NO/X52NO S355G14/G15+N HN(HEAT) LRS	
	PINTADO: STENCILLED	TRI API SPEC 5L 5L-0011 (SELLO API) (MM/AA) 114,3 8,6 L360NO / X52NO P SL2 SMLS HN (HEAT) 20,5 MPA (LENGTH IN METERS) M ISO 3183 EN10225 S355 G14/G15+N PO:436000-1 ITEM:004 NORSOK M-630 MDS-C22 M-120 MDS-Y27/-Y22 (N.TUBO)	
	CODIGO COLOR: COLOUR CODE	BLUE - BLUE LONGITUDINAL BANDS	
TRAT. TERMICO: HEAT TREATMENT	NORMALIZADO. ENFRIADO AL AIRE / NORMALIZED. AIR COOLED 970 °C 19 MIN		

DESCRIPCION SUMINISTRO / DESCRIPTION OF DELIVERY.

ITEM FAB. T.R. ITEM	ITEM CLI. CLIENTS ITEM	LONG.INDIV (M) INDIVIDUAL LENGTH	COLADA CASTNR.	Nº TUBOS QUANTITY	LONG. TOTAL (M) LENGTH	PESO(KG) WEIGHT
000040	004.	8,000 - 11,800	124907	62	666,710	14.953
TOTAL				62	666,710	14.953

ITEM 2990

TUBOS REUNIDOS INDUSTRIAL GARANTIZA QUE TODOS LOS TUBOS CUBIERTOS POR ESTE CERTIFICADO CUMPLEN LOS REQUISITOS DEL PEDIDO Y CON LAS ESPECIFICACIONES ARRIBA MENCIONADAS.
TUBOS REUNIDOS INDUSTRIAL CERTIFY THAT ALL THE TUBES COVERED BY THIS CERTIFICATE COMPLY WITH ORDER REQUIREMENTS AND ABOVE MENTIONED SPECIFICATIONS .

AMURRIO 07.01.2020 LLOYD'S REGISTER PRJ-1109997314-13

Lloyd's Register España, S.A.
Bilbao Office
Lloyd's Register

CONTROL DE CALIDAD TUBOS REUNIDOS INDUSTRIAL
TUBOS REUNIDOS INDUSTRIAL QUALITY CONTROL
Alex Villanueva
AMURRIO GARANTÍA DE CALIDAD

TUBOS REUNIDOS INDUSTRIAL, S.L.U
Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.2

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000350262/0 Rev. 002

ENSAYOS NO DESTRUCTIVOS. / NON DESTRUCTIVE TESTS

ENSAYO / TEST	%CONTROL / TEST RATE(%)	REQUISITOS / REQUIREMENTS	RESULTADO / RESULT
VISUAL Y DIMENSIONAL/ VISUAL & DIMENSIONAL INSP.	100%		O.K.
P.HIDROSTATICA/ HYDROTEST	100%	2.970,0 PSI 5 SEC.	O.K.
CORRIENTES INDUCIDAS/ EDDY CURRENTS	100%	ASTM E 309. N12.5/HS 3.2 MM	O.K.
U.S. (LONGITUDINAL)/ ULTRASONIC TEST (LONG)	100%	UNE-EN ISO 10893-10 U2/C	O.K.
U.S.(LAMINAC.)/ ULTRASONIC TEST (LAMINATIONS)	100%	UNE-EN ISO 10893-8 U3	O.K.
U.S.(ESPESOR)/ ULTRASONIC TEST (WALL THICKNESS)	100%	UNE-EN ISO 10893-12	O.K.
P.MAGNETICAS (EXTREMOS)/ MAGNETIC PARTICLE INSP.(ENDS)	100%	ASTM E 709 EXTR.	O.K.
MAGNETISMO RESIDUAL/ RESIDUAL MAGNETISM		MAX 30,0 GAUSS	

ANALISIS DE COLADA / CAST ANALYSYS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Sn	Ti	Nb	B	Ca	Pb	Bi	C.E.
MIN.		0,90	0,15								0,0200								
MAX.	0,16	1.60	0,45	0,020	0,0070	0,250	0,3000	0,0800	0,3000	0,1000	0,0600	0,0200	0,0200	0,0400	0,0005	0,0050	0,0100	0,0100	**0,43**
124907	0,1370	1,24	0,29	0,007	0,0019	0,068	0,0790	0,0574	0,1782	0,0910	0,0430	0,0073	0,0038	0,0019	0,0001	0,0015	0,0004	0,0022	**0,40**

	As	Sb	N
MIN.			
MAX.	0.0200	0,0100	0,0110
124907	0,0061	0,0044	0,0078

ANALISIS DE PRODUCTO / PRODUCT ANALYSIS

	C	Mn	Si	P	S	Cr	Ni	Mo	Cu	V	Al	Sn	Ti	Nb	B	Ca	Pb	Bi	C.E.
MIN.		0,90	0,15								0,0200								
MAX.	0,16	1.60	0.45	0,020	0,0070	0,250	0,3000	0,0800	0,3000	0,1000	0,0600	0,0200	0,0200	0,0400	0,0005	0,0050	0,0100	0,0100	**0,43**
124907	0,1500	1,24	0.29	0,008	0,0023	0,070	0,0800	0,0600	0,1800	0,0910	0,0390	0,0070	0,0040	0,0020	0,0001	0,0006	0,0010	0,0010	**0,42**
124907	0,1200	1,26	0,29	0,007	0,0023	0,070	0,0700	0,0600	0,1800	0,0920	0,0380	0,0070	0,0040	0,0019	0,0001	0,0007	0,0010	0,0010	**0,39**

AMURRIO 07.01.2020 LLOYD'S REGISTER PRJ-1109997314-13

Lloyd's Register España, S.A.
Bilbao Office
Lloyd's Register

CONTROL DE CALIDAD DE TUBOS REUNIDOS
TUBOS REUNIDOS INDUSTRIAL (QUALITY CONTROL)
AMURRIO (SPAIN)
GARANTIA DE CALIDAD

TUBOS REUNIDOS INDUSTRIAL, S.L.U
Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.2

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000350262/0 Rev. 002

	As	Sb	N
MIN.			
MAX.	0,0200	0,0100	0,0110
124907	0,0050	0,0020	0,0077
124907	0,0050	0,0020	0,0096

FORMULAS

	(01)	(02)	(03)	(04)	(05)
MIN.		2,000		0,070	
MAX.	0,100	9,9999	0,250	0,100	0,800
124907	0,097	5,0649	0,240	0,093	0,390
124907	0,0979	3,9583	0,220	0,0939	0,380

(01) Nb + Ti + V
(02) Al / N2
(03) Pcm: C +Si/30 + (Cr + Mn + Cu)/20 +Ni/60 + Mo/15 + V/10 + 5*B
(04) Nb + V
(05) Cr + Mo + Ni + Cu

ENSAYOS DE TRACCIÓN / TENSILE TEST

COLADA CAST	Nº	L/T (1)	TP (2)	DIMENSION (mm)	L.ELAST. YIELD POINT (Mpa) (3)	R.TRACC. T.STRENGTH (Mpa)	ALARG. ELONG. (%) (4)	Estricción Reduction of Area (%)	DUREZA HARDNESS (HV)	E / R
MIN.					360	460	22			
MAX.					530	620			248	0,00
124907	1									
124907	201/308	L	P	25,10 x 8,700	406	557	32		168	0,73
124907	205/308	L	P	25,00 x 9,200	421	568	33		173	0,74

(1) : L = LONGITUDINAL // T = TRANSVERSAL
(2) : T = Full size tube // P = Strip specimen // C = Cylindrical
(3) : yield point (0,5%)
(4) : Lo = 2" (50 mm)

ENSAYOS DE IMPACTO - CHARPY V / IMPACT TEST

COLADA CAST	Nº	L/T (1)	DIMENS (mm)		Tª (ºC)	RESILIENCIA IMPACT TEST (J)			AVG (J)	AREA DUCTIL SHEAR AREA (%)
			10	10,00	-40	38 / 50				
			10	10,00	-50	38 / 50				
124907	1	L	10	7,50	-46	159	151	163	157	90
124907	201/308	L	10	7,50	-40	131	200	122	151	90
124907	205/308	L	10	7,50	-50	178	165	158	167	90

(1) : L = LONGITUDINAL // T = TRANSVERSAL

AMURRIO 07.01.2020 LLOYD'S REGISTER PRJ-1109997314-13

Lloyd's Register España, S.A.
Bilbao Office
Lloyd's Register

CONTROL DE CALIDAD DE TUBOS REUNIDOS INDUSTRIAL
TUBOS REUNIDOS INDUSTRIAL QUALITY CONTROL
P.O.:
GARANTIA DE CALIDAD

TUBOS REUNIDOS INDUSTRIAL, S.L.U

Barrio Sagarribai, 2 - 01470 AMURRIO (Spain)

QUALITY MANAGEMENT SYSTEM certified by LRQA

EN 10204:2004 / 3.2

CERTIFICADO DE CALIDAD
MILL TEST CERTIFICATE

Nº 0000350262/0 Rev. 002

ENSAYOS DE DUREZA EN EL ESPESOR / THROUGH-WALL HARDNESS TEST

COLADA CAST	Nº	LOCALIZACIÓN LOCATION	DUREZAS EN EL ESPESOR THROUGH-WALL HARDNESS (HV)				MEDIA MEAN
MIN.			0,00				
MAX.			248,00				
		Outside-Wall	172,00	170,00	168,00	172,00	170,50
124907	- 1	Mid-Wall	168,00	169,00	172,00	172,00	170,25
		Inside-Wall	173,00	175,00	168,00	169,00	171,25

ANEXOS / ANNEX

FULLY KILLED
RADIATION FREE
MERCURY FREE
NO WELD REPAIR
FINE GRAIN

TENSILE TEST ACC TO EN 10225:2009

HEAT	T	P	DIMENSION (MM)	YIELD POINT T. STRENGTH (MPA)	ELONG. (%)	HARDNESS HV	E/R 0,88 max
124907	L		24,90 X 9,000	411	542	30,00	165	0,76
124907	L		25,00 X 8,600	415	557	31,00	168	0,74

LO= P PROPORCIONAL = 5,65 X SO½
YIELD POINT: (RP 0,2)

acc to:
NORSOK M-630 ed 6,oct 2013 , MDS-C22 rev5
NORSOK M-120 ed 5, nov 2008, MDS-Y27 rev.4, june 2007 /Y22 rev 5 june 2007

Lloyd's Register España, S.A.
Bilbao Office
Lloyd's Register

AMURRIO 07.01.2020 LLOYD'S REGISTER PRJ-1109997314-13

CONTROL DE CALIDAD DE TUBOS REUNIDOS
TUBOS REUNIDOS INDUSTRIAL QUALITY CONTROL
Alex Villanueva
TUBOS REUNIDOS INDUSTRIAL, S.L.U. GARANTÍA DE CALIDAD

Inspection No – Prüf-Nr - Certificat No – N° di collaudo Blatt-Nr. – Sheet No – Page-N° – Pag-N°: 1 of 1

DTM 1275301/1

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

CEOC INTERNATIONAL

Customer – Besteller –Acheteur – Committente:	Part – Teil –Partie – Parte:	**complete**
	Order No – Bestell-Nr. –N° de la commande – N° dell'ordine:	**1110026710**
Manufacturer – Hersteller –Fabricant – Produttore:	dated – vom –date – in data:	**14.11.2012**
Vallourec & Mannesmann Tubes V & M Deutschland GmbH, Mülheim / D	Works-No – Werks-Nr. – N° usine – Commessa N°:	**852/98630**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:

API Spec. 5 L, PSL 2, 10.2007, without API monogram, V&M-M-L14 Rev. 3 dated 12/2008 / EN 10225:2001 / BS 7191 : 1989 *

Material – Werkstoff –Matière – Materiale: according to – entsprechend –suivant – secondo: Edition – Ausgabe –Edizione:

X 52 N mod. / L 360N Mod. **requirements as above**

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:

Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:

Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore:

LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:

V&M04

Marking – Kennzeichung –Marquage – Punzonature:

see attached works test certificate.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pc.	**Hot Finished Seamless Line Pipes (Ends bevelled, angle 30 degrees)**		
1	-30-	6 5/8 o.d. x 0,280 w.th. inches Total length: 377,59 m Total weight: 10.854 kg	376134	773, 773A

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

ITEM 870 + 880

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisisiti richiesti cone da allegati.

Location – Ort –Lieu – Localita **Dortmund**

Date – Datum –Data **23 April 2013**

*** / NACE Standard MR-0175-2003**

FOR THE SURVEYORS: R. SPRIESTERBACH
Surveyor to Lloyd's Register EMEA

A subsidiary of Lloyd's Register Group Limited
(CEOC Member Organisation)
Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:

Works test certificate no. 27752Mu13.

1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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LLOYD'S REGISTER GROUP PAPER (01/2005)

VALLOUREC & MANNESMANN TUBES

Continuous Mandrel Mill MH

V&M Order No.: V&M Auftrag No.de Commande	**852 / 9863 0**	**Pos.-Nr.:** Item-No.	**001**
Customer: Kunde/Client		**P.O. Nr.** No.	**1110026710**
User: Verwender/	**NICHT ERMITTELTE LAENDER**	**P.O. Nr:** No.	
Adresse: Warenempfänger/adresse			
Destination: Bestimmungsland	**NICHTERMITTELTE LAENDER**		

Tally - List
Rohr Liste / List De Colisage

PROJECT:

Dimension

Outside Diameter - Wall Thickness
Aussendurchmesser/Diametre Exterieur - Wanddicke/Expaisseur

168,3 X 7,11 mm

X52NMOD.

No of pieces Anzahl / Nombre de pieces	Length Länge/ Longeur (m)	Length Länge/ Longeur (ft)	Weight Gewicht/Poids (kg)	Weight Gewicht/Poids (lbs)
30	377,59	1238,81	10854	23929

LLOYD'S REGISTER NO. DTM

1 2 7 5 3 0 1 / 1 = 2246/ 3402

VMD Order	Item no.	Grade	Dimension
862 / 9863 0	001	X52NMOD.	168,3 X 7,11 mm

Pipe-no. Rohr/Tube	Lenght/Länge/Longueur (m)	(ft)	Weight/Gewicht/Poids (kg)	(lbs)	Heat-no. No.de Coulee	Lot-no.
1	12,497	41,001	359,0	791,5	376134	0001
2	12,498	41,004	358,0	789,3	376134	0001
3	12,497	41,001	358,0	789,3	376134	0001
4	12,935	42,438	371,0	817,9	376134	0001
5	12,931	42,425	368,5	812,4	376134	0001
6	12,932	42,428	369,0	813,5	376134	0001
7	12,542	41,148	359,5	792,6	376134	0001
8	12,540	41,142	364,0	802,5	376134	0001
9	12,537	41,132	359,5	792,6	376134	0001
10	12,411	40,719	361,5	797,0	376134	0001
11	12,508	41,037	360,5	794,8	376134	0001
12	12,486	40,965	363,0	800,3	376134	0001
13	12,461	40,883	363,5	801,4	376134	0001
14	12,924	42,402	371,5	819,0	376134	0001
15	12,535	41,125	361,0	795,9	376134	0001
16	12,017	39,426	350,0	771,6	376134	0001
17	12,133	39,806	350,5	772,7	376134	0001
18	12,721	41,736	364,5	803,6	376134	0001
19	12,859	42,188	366,5	808,0	376134	0001
20	12,859	42,188	367,0	809,1	376134	0001
21	12,862	42,198	368,0	811,3	376134	0001
22	11,675	38,304	335,0	738,5	376134	0001
23	12,785	41,946	364,0	802,5	376134	0001
24	12,783	41,939	366,0	806,9	376134	0001
25	12,745	41,814	367,0	809,1	376134	0001
26	12,468	40,906	360,0	793,7	376134	0001
27	12,223	40,102	354,0	780,4	376134	0001
28	12,522	41,083	358,5	790,4	376134	0001
29	12,986	42,605	370,0	815,7	376134	0001
30	12,724	41,745	364,5	803,6	376134	0001

LLOYD'S REGISTER NO. [illegible]

1 2 7 5 3 0 1 / 1 =

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 1 / 6 Date: 28.03.2013

(A01) **V&M DEUTSCHLAND GmbH**	(A08.1) **V&M-Order-No.** 85298630 (A08.2) **Suborder**
(A06.1) Customer NICHT ERMITTELTE LAENDER	
(A06.2) **Orderer**	(A07.2) **Order-No.** 1110026710 **Date** 14.11.2012

(B01, B02, B04) **Description of the product**	LINE PIPE SEAMLESS IF POSSIBLE 12000 - 13000 MM ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH IN BUNDLES OF 2,5 T TEST CONDITIONS AND FREQUENCY ACC. TO SPEC. V&M-M-L 14, REV. 3 DATED 12/2008 REPORT ELEMENTS: AL, B, N PER HEAT AND PRODUCT ANALYSIS API SPEC. 5 L, PSL 2, 10.2007 WITHOUT API MONOGRAM SPECIFICATION V&M-M-L14, REV. 3, DATED 12/2008 / EN 10225:2001 / BS 7191:1989 / NACE STANDARD MR 0175-2003 X 52 N MOD / L360N MOD. - GRADES S355G14+N AND S355G15+N ACC. TO EN 10225:2001 ARE COVERED UP TO 40 MM WALL THICKNESS. NORMALIZED FULLY KILLED-FINE GRAINED CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES IN ACCORDANCE WITH BS 7191 355 EM DTM 1275301

(A10)
Inspection by LLOYD'S REGISTER EMEA

(A13) **V&M Item**	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
1			O.D. 6 5/8 IN X WTH. 0,280 IN	IN RANDOM MILL LENGTH 11000 - 13000 MM

0000016-00022/00033

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 2 / 6 Date: 28.03.2013

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
1		30	377,59	10.854

V&M Item	Delivery Note-No	Packing list-No
1	48080	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	1.10	-	-	0.020	-	-	-	-
max	-	0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
376134	Oxygen (BOF)	0.130	0.290	1.43	0.019	0.0010	0.038	0.020	0.080	0.100	0.010

(B07.1) Heat	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %			
min	-	-	-	-	-	-	-	-	-			
max	0.060	0.020	0.040	0.0120	0.0005	.43	.25	0.50	0.12			
376134	0.040	0.005	0.034	0.0050	0.0003	.40	.22	0.21	0.08			

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

Heats fully killed

AL >= 2,2 X N

EF3 = V + NB MAX 0,100 = S 0,074 / K 0,075 / K 0,077

(C72)

PRODUCT CHEMICAL ANALYSIS

LLOYD'S REGISTER NO. DTM

1 2 7 5 3 0 1 / 1 = 7

2249/ 3402

0000016-00023/00033

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 3 / 6 Date: 28.03.2013

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.250	1.10	-	-	0.020	-	-	-	-
max		0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
376134		0.128	0.286	1.43	0.020	0.0005	0.036	0.016	0.070	0.107	0.006
376134		0.125	0.292	1.45	0.020	0.0005	0.038	0.016	0.073	0.108	0.007

(B07.1) Heat	(C00.1) Test Piece	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %	
min		-	-	-	-	-	-	-	-	-	
max		0.060	0.020	0.040	0.0120	0.0005	.43	.25	0.50	0.12	
376134		0.043	0.004	0.032	0.0071	0.0001	.40	.22	0.20	0.08	
376134		0.043	0.004	0.034	0.0063	0.0001	.40	.22	0.20	0.08	

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

CHECK ANALYSIS PER HEAT

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	$R_{t0.5}$ MPa	R_m MPa	2" %	R/R_m -	Z %				
min		-	360	490	22.0	-	-				
max		-	530	620	-	0.93	-				
376134	773A	25.40X07.06	367	573	35.5	0.64	71				

LLOYD'S REGISTER NO. DTM

1 2 7 5 3 0 1 / 1

2250/ 3402

TENSILE TEST RESULTS

0000016-0_002 4/00033

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 4 / 6 Date: 28.03.2013

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
			ReH	R_m	$5,65\sqrt{So}$	R/R_m	Z				
	-	mm	MPa	MPa	%	-	%				
min		-	358	490	20.0	-	-				
max		-	-	620	-	0.80	-				
376134	773	20.08X06.93	392	534	29.0	0.73	73				

MECHANICAL PROPERTIES CORRESPONDING TO 355 EM RESP. 355 EMZ
ACC. TO BS 7191 - 89
RING FLATTENING TEST ACC. TO ASTM A 530: SATISFACTORY
IMPACT TEST ON LONGITUDINAL SPECIMENS,
TYPE AND NUMBER OF TEST COUPON ACC. TO DELIVERY CONDITIONS

LLOYD'S REGISTER NO. DTM
1275301 / 1

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	27.0	27.0	27.0	38.0					
max		-	-	-	-	-					
376134	773	0.400	74,0	96,0	66,0	78,6					

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT		10 MIN 920 DEGREES C AIR	
HEAT TREATMENT	NORMALIZED		
HYDROSTATIC TEST	207 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
GRAIN SIZE	ASTM E 112, TABLE 1: 8 AND FINER		

2251/ 3402

0000016-00025/00033

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 5 / 6 Date: 28.03.2013

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HARDNESS TEST	HRC MAX. 22 IN ACC. TO NACE MR 01-75		

ULTRASONIC TEST FOR LONGITUDINAL DEFECTS ACC. TO API 5L ,
PSL2 NOTCH DEPTH MAX. 5%,OF WALL THICKNESS,
HOWEVER MIN. 0,4 MM, MAX. 1,5 MM
-EN10246-7 ACCEPTANCE CATEGORY U3, SUB-CATEGORY C
(10% TESTGROOVE DEPTH) AND EN 10225:2001
: SATISFACTORY
US-TEST FOR LONGITUDINAL DEFECTS ACC. TO EN 10246-7
ACCEPTANCE CATEGORY U2, SUB-CATEGORY C: SATISFACTORY
UNINSPECTED ENDS CUT OFF.

(A04, B06)

MARKING, IDENTIFICATION

1 DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS MANUFACTURER´S MARK 6 5/8 X 0,28 TERMS OF DELIVERY PSL 2 X52N MOD /L360N MOD HEAT-NO. PROCESS OF MANUFACTURE SMLS N5 WA INSPECTOR´S SIGN PIPE NO. (TALLY-NR.) PAINT STENCILED ON ONE SIDE 6 5/8 X 0,28 168,3 X 7,112 TUBE/PIPE LENGTH FT TUBE/PIPE WEIGHT LBS 85298630 V&M ITEM-NO 1 PIPE NO. (TALLY-NR.) HEAT-NO. MANUFACTURER´S NAME

Enclosures

TALLY LIST SEE APPENDIX

LLOYD'S REGISTER NO. EMEA

1275301 / 1

(Z01)

The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

15 APR 2013

Date	28.03.2013	
Validated by	Inspection Representative	Third Party Representative
	DEYMANN D. Deymann	
☎	(0208) 810-4650	
🖷	(0208) 810-5659	
@	DIETER.DEYMANN@VMTUBES.DE	
Stamp		Lloyd's Register EMEA M. Mielke Business Centre Central Dortmund Lloyd's Register

Indication in parentheses correspond to attributes according to EN 10168

0000016-00026/00033

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES **Vallourec Group**	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27752Mu13 (A03) Page: 6 / 6 Date: 28.03.2013

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

LLOYD'S REGISTER NO. [illegible]

1 2 7 5 3 0 1 / 1

2253/ 3402

0000016-00027/00033

Inspection No – Prüf-Nr - Certificat No – N° di collaudo Blatt-Nr. – Sheet No – Page-N° – Pag-N°: 1 of 1 **DTM 1384136/1**

Inspection Certificate – Abnahmeprüfzeugnis – Certificat De Réception – Certificato Collaudo Materiali

Customer – Besteller –Acheteur – Committente:

Part – Teil –Partie – Parte: **complete**

Order No – Bestell-Nr. –N° de la commande – N° dell'ordine: **1110038316**

dated – vom –date – in data: **11.04.2013**

Manufacturer – Hersteller –Fabricant – Produttore:
Vallourec & Mannesmann Tubes
V & M Deutschland GmbH, Mülheim / D

Works-No – Werks-Nr. – N° usine – Commessa N°: **852/03071**

Article – Prüfgegenstand –Produit – Prodotto:

Technical requirements/Demand – Prüfgrundlagen/Anforderungen –Spécifications techniques/ Exigences – Norma di controllo/Requisiti:
API Spec. 5 L, PSL 2, 10.2007, without API monogram, V&M-M-L14 Rev. 3 dated 12/2008 / EN 10225:2001 / BS 7191 : 1989 *

Material – Werkstoff –Matière – Materiale: according to – enstprechend –suivant – secondo: Edition – Ausgabe –Edizione:
X 52 N mod. / L 360N Mod. **requirements as above**

State of delivery – Lieferzustand –Etat de livraison – Stato di fornitura:
Normalised

Steelmaking process – Erschmelzungsart –Procédé d'élaboration – Procedimento di elaborazione:
Oxygen (BOF)

Inspector's stamp- Stempel des Sachverständigen - Poinçon de l'expert – Marchio del collaudatore:
LR DTM MM

Brand of the manufacturer –Herstellerzeichen – Marque du fabricant – Marchio del produttore:
V&M04

Marking – Kennzeichung –Marquage – Punzonature:
see attached works test certificate.

Extent of material delivery – Umfang der Lieferung –Liste descriptive – Ammontare della fornitura:

Item-No. Pos.-Nr. Poste-N° N° pos.	Number of Stückzahl Qte Numero pezzi	Article –Gegenstand –Désignation du produit – Tipo di prodotto	Heat No Schmelze-Nr. N° Coulée N° Colata	Test No Probe-Nr. N° d'éprouvette N° di prova
	pc.	**Hot Finished Seamless Line Pipes (Ends bevelled, angle 30 degrees)**		
1	**-29-**	**6 5/8 o.d. x 0,280 w.th. inches Total length: 359,32 m Total weight: 10.454 kg**	**378125**	**741, 741A**

ITEM 980

Additional remarks – Zusätzliche Angaben –Autres remarques – Osservazione:

The requirements are fulfilled as per Annex. - Die gestellten Anforderungen sind lt. Anlagen erfüllt.
Les conditions imposées sont satisfaites suivant annexes. - I risultati sono conformi ai requisisiti richiesti cone da allegati.

Location – Ort –Lieu – Localita **Dortmund**

Date – Datum –Data **23 September 2013**

*** / NACE Standard MR-0175-2003**

FOR THE SURVEYORS: U. LENTZE
Surveyor to Lloyd's Register EMEA

A subsidiary of Lloyd's Register Group Limited
(CEOC Member Organisation)
Inspecting Authority – Prüfstelle - Organisme de Contrôle

Annex – Anlagen –Annexes – Allegati:
Works test certificate no. 34300Mu13.
1) Test results -Ergebnis der Prüfungen - Résultats des essais - Risultati delle prove
Other annexes in 1) Weitere Angaben in 1) - - Autres annexes en 1) - Altri allegati in 1)

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VALLOUREC & MANNESMANN TUBES

Continuous Mandrel Mill MH

V&M Order No.: V&M Auftrag No.de Commande	852 / 0307 1	**Pos.-Nr.:** Item-No.	001
Customer: Kunde/Client		**P.O. Nr.** No.	1110038316
User: Verwender/	NICHT ERMITTELTE LAENDER	**P.O. Nr:** No.	
Adresse: Warenempfänger/adresse			
Destination: Bestimmungsland	NICHTERMITTELTE LAENDER		

Tally - List
Rohr Liste / List De Colisage

PROJECT:

Dimension

Outside Diameter - Wall Thickness
Aussendurchmesser/Diametre Exterieur - Wanddicke/Expaisseur

168,3 X 7,11 mm

X52NMOD.

No of pieces Anzahl / Nombre de pieces	Length Länge/ Longeur (m)	Length Länge/ Longeur (ft)	Weight Gewicht/Poids (kg)	Weight Gewicht/Poids (lbs)
29	359,32	1178,87	10454	23047

LLOYD'S REGISTER NO DTM

1384136 / 1 - 7

2255/ 3402

VMD Order	Item no.	Grade	Dimension
852 / 0307 1	001	X52NMOD.	168,3 X 7,11 mm

Pipe-no.	Lenght/Länge/Longueur		Weight/Gewicht/Poids		Heat-no.	Lot-no.
Rohr/Tube	(m)	(ft)	(kg)	(lbs)	No.de Coulee	
1	12,486	40,965	362,5	799,2	378125	0001
2	11,818	38,773	343,0	756,2	378125	0001
3	12,494	40,991	363,0	800,3	378125	0001
4	12,403	40,692	357,5	788,2	378125	0001
5	12,402	40,689	357,5	788,2	378125	0001
6	12,403	40,692	359,0	791,5	378125	0001
7	12,289	40,318	356,5	785,9	378125	0001
8	12,289	40,318	358,0	789,3	378125	0001
9	12,494	40,991	363,0	800,3	378125	0001
10	12,482	40,951	363,5	801,4	378125	0001
11	11,415	37,451	330,5	728,6	378125	0001
12	12,449	40,843	361,5	797,0	378125	0001
13	12,854	42,172	372,5	821,2	378125	0001
14	12,460	40,879	363,0	800,3	378125	0001
15	11,928	39,134	344,0	758,4	378125	0001
16	11,928	39,134	347,5	766,1	378125	0001
17	11,930	39,140	346,0	762,8	378125	0001
18	12,646	41,490	370,5	816,8	378125	0001
19	12,728	41,759	371,5	819,0	378125	0001
20	12,119	39,760	356,0	784,8	378125	0001
21	12,816	42,047	375,5	827,8	378125	0001
22	12,628	41,430	369,5	814,6	378125	0001
23	12,486	40,965	362,0	798,1	378125	0001
24	12,340	40,486	361,0	795,9	378125	0001
25	12,337	40,476	357,0	787,1	378125	0001
26	12,340	40,486	359,5	792,6	378125	0001
27	12,833	42,103	375,0	826,7	378125	0001
29	12,775	41,913	373,5	823,4	378125	0001
30	12,734	41,778	373,0	822,3	378125	0001

LLOYD'S REGISTER M'L DTM
1384136 / 1 - J

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES **Vallourec Group**	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 34300Mu13 (A03) Page: 1 / 5 Date: 02.09.2013

(A01) **V&M DEUTSCHLAND GmbH**	(A08.1) **V&M-Order-No.** 85203071 (A08.2) **Suborder**
(A06.1) Customer NICHT ERMITTELTE LAENDER	
(A06.2) **Orderer**	(A07.2) **Order-No.** 1110038316 **Date** 11.04.2013

(B01, B02, B04) **Description of the product**	LINE PIPE SEAMLESS IF POSSIBLE 12000 - 13000 MM ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH IN BUNDLES OF 2,5 T TEST CONDITIONS AND FREQUENCY ACC. TO SPEC. V&M-M-L 14, REV. 3 DATED 12/2008 REPORT ELEMENTS: AL, B, N PER HEAT AND PRODUCT ANALYSIS API SPEC. 5 L, PSL 2, 10.2007 WITHOUT API MONOGRAM SPECIFICATION V&M-M-L14, REV. 3, DATED 12/2008 / EN 10225:2001 / BS 7191:1989 / NACE STANDARD MR 0175-2003 X 52 N MOD / L360N MOD. - GRADES S355G14+N AND S355G15+N ACC. TO EN 10225:2001 ARE COVERED UP TO 40 MM WALL THICKNESS. NORMALIZED CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES IN ACCORDANCE WITH BS 7191 355 EM DTM 1384136
(A10) **Inspection by** LLOYD´S REGISTER EMEA	

(A13) **V&M Item**	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
1			O.D. 6 5/8 IN X WTH. 0,280 IN	IN RANDOM MILL LENGTH 11000 - 13000 MM

0000016-00014/00024

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schülzenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 34300Mu13 (A03) Page: 2 / 5 Date: 02.09.2013

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
1		29	359,32	10.454

V&M Item	Delivery Note-No	Packing list-No
1	54871	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	1.10	-	-	0.020	-	-	-	-
max	-	0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
378125	Oxygen (BOF)	0.130	0.300	1.43	0.016	0.0010	0.033	0.040	0.050	0.100	0.010

(B07.1) Heat	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %			
min	-	-	-	-	-	-	-	-	-			
max	0.060	0.020	0.040	0.0120	0.0005	.43	.25	0.50	0.12			
378125	0.050	0.006	0.032	0.0104	0.0003	.40	.22	0.20	0.09			

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

Heats fully killed

AL >= 2,2 X N

EF3 = V + NB MAX 0,100 = S 0,082 / K 0,084 / K 0,083

(C72)

PRODUCT CHEMICAL ANALYSIS

LLOYD'S REGISTER NO. DTM

1 3 8 4 1 3 6 / 1

0000016-00015/00024

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 34300Mu13 (A03) Page: 3 / 5 Date: 02.09.2013

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.250	1.10	-	-	0.020	-	-	-	-
max		0.140	0.450	1.55	0.020	0.0050	0.060	0.200	0.200	0.200	0.080
378125		0.128	0.306	1.46	0.017	0.0006	0.035	0.041	0.051	0.109	0.006
378125		0.126	0.306	1.46	0.016	0.0005	0.035	0.041	0.051	0.109	0.006

(B07.1) Heat	(C00.1) Test Piece	V %	Ti %	Nb/Cb %	N %	B %	CQ 03 %	CQ 08 %	EF 10 %	EF 02 %	
min		-	-	-	-	-	-	-	-	-	
max		0.060	0.020	0.040	0.0120	0.0005	.43	.25	0.5	0.12	
378125		0.051	0.005	0.033	0.0112	0.0001	.40	.22	0.2	0.09	
378125		0.051	0.005	0.032	0.0111	0.0001	.40	.22	0.2	0.09	

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 10	EF = CR + MO + NI + CU
EF 02	EF = V + TI + NB

CHECK ANALYSIS PER HEAT

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -	Z %				
min		-	360	490	22,0	-	-				
max		-	530	620	-	0.93	-				
378125	741A	25.47X07.46	386	521	37.0	0.74	69				

0000016-00016/00024

...TER NO
1384136 4

TENSILE TEST RESULTS

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 34300Mu13 (A03) Page: 4 / 5 Date: 02.09.2013

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio	(C15) Red.Area				
		mm	ReH MPa	R_m MPa	$5{,}65\sqrt{So}$ %	R/R_m -	Z %				
min		-	358	490	20.0	-	-				
max		-	-	620	-	0.80	-				
378125	741	19.95X06.99	398	524	33.0	0.76	70				

MECHANICAL PROPERTIES CORRESPONDING TO 355 EM RESP. 355 EMZ
ACC. TO BS 7191 - 89
RING FLATTENING TEST ACC. TO ASTM A 530: SATISFACTORY
IMPACT TEST ON LONGITUDINAL SPECIMENS,
TYPE AND NUMBER OF TEST COUPON ACC. TO DELIVERY CONDITIONS

LLOYD'S REGISTER NO. DTM
1384136/1

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	27.0	27.0	27.0	38.0					
max		-	-	-	-	-					
378125	741	0.400	120	130	119	123					

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT		10 MIN 920 DEGREES C AIR	
HEAT TREATMENT	NORMALIZED		
HYDROSTATIC TEST	207 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
FLATTENING TEST			SATISFACTORY
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
GRAIN SIZE	ASTM E 112, TABLE 1: 8 AND FINER		

2260/ 3402

0000016-00017/00024

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 34300Mu13 (A03) Page: 5 / 5 Date: 02.09.2013

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
PIPE PRODUCTION METHOD	SEAMLESS, HOT-ROLLED		
HARDNESS TEST	HRC MAX. 22 IN ACC. TO NACE MR 01-75		

ULTRASONIC TEST FOR LONGITUDINAL DEFECTS ACC. TO API 5L ,
PSL2 NOTCH DEPTH MAX. 5%,OF WALL THICKNESS,
HOWEVER MIN. 0,4 MM, MAX. 1,5 MM
-EN10246-7 ACCEPTANCE CATEGORY U2, SUB-CATEGORY C
(10% TESTGROOVE DEPTH) AND EN 10225:2001
: SATISFACTORY
UNINSPECTED ENDS CUT OFF

LLOYD'S REGISTER NO. DTM
1 3 8 4 1 3 6 / 1

(A04, B06)

MARKING, IDENTIFICATION

1

DIE STAMPED ON ONE SIDE ROUND NOSE TOOLS MANUFACTURER´S MARK 6 5/8 X 0,28 TERMS OF DELIVERY PSL 2 X52N MOD /L360N MOD HEAT-NO. PROCESS OF MANUFACTURE SMLS N5 WA INSPECTOR´S SIGN PIPE NO. (TALLY-NR.) PAINT STENCILED ON ONE SIDE 6 5/8 X 0,28 168,3 X 7,112 TUBE/PIPE LENGTH FT TUBE/PIPE WEIGHT LBS 85203071 V&M ITEM-NO 1 PIPE NO. (TALLY-NR.) HEAT-NO. MANUFACTURER´S NAME

Enclosures

TALLY LIST SEE APPENDIX

(Z01)
The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	02.09.2013	04 SEP 2013
Validated by	Inspection Representative	Third Party Representative
	DEYMANN D. Deymann	Lloyd's Register EMEA M. Mielke Lloyd's Register Dortmund
☎	(0208) 810-4650	
🖷	(0208) 810-5659	
@	DIETER.DEYMANN@VMTUBES.DE	
Stamp		

Indication in parentheses correspond to attributes according to EN 10168

0000016-0001 8/00024

2261/ 3402

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 1 / 6 Date: 07.11.2012

Certificat n° 21501Mu12 , 05.11.2012 is replaced by this updated version n° 21501Mu12

(A01) **V&M DEUTSCHLAND GmbH**	(A08.1) **V&M-Order-No.** 85294611 (A08.2) **Suborder**
(A06.1) Customer	
(A06.2) **Orderer**	(A07.2) **Order-No.** SS69824 **Date** 08.06.2012
(A06.3) **Client's Client**	(A07.3) **Order-No.** V4394

(B01, B02, B04) **Description of the product**	STRUCTURAL PIPE AND TUBING SEAMLESS RL AT THE UPPER LIMIT ENDS BEVELLED, ANGLE 30 DEGREES (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION OUTSIDE DRY VARNISH IN BUNDLES OF MAX. 3000 KG EN 10225:2009 -SPEC. MIM/002/07/008, REV. 14 (22TH MARCH 2012) ISO 3183:2007 (MODIFIED) / API 5L (OCTOBER 2007) BS 7191:1989 / NORSOK MDS - Y22 REV. 5 (JUNE 2007) ANSI/NACE MR 0175/ISO 15156-2:2009 S355G15 +N / L360N MOD. PSL 2 (X52N MOD. PSL 2) / GRADE 355EM MOD. FULLY KILLED-FINE GRAINED ~~DTM-1279420~~
(A10) **Inspection by LLOYD´S REGISTER EMEA**	

(A13) V&M Item	(A09) Cust. Item	(B14) Item text	(B09) Dimensions	(B10) Single length
7			O.D. 168,3 MM X WTH. 9,52 MM	IN RANDOM MILL LENGTH 8000 - 12000 MM

0000023-00030/00066

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 2 / 6 Date: 07.11.2012

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
7		26	286,87	11.101

V&M Item	Delivery Note-No	Packing list-No
7	41234	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.250	-	-	-	-	-	-	-	-
max	-	0.140	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
356835	Oxygen (BOF)	0.140	0.290	1.44	0.025	0.0010	0.034	0.030	0.110	0.100	0.010

ITEM 1020

(B07.1) Heat	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.080	0.0200	0.0150	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100	.43	.25
356835	0.040	0.0030	0.0030	0.005	0.037	0.0059	0.001	0.0005	0.0014	0.0030	.42	.24

(B07.1) Heat	EF 02 %	EF 10 %
min	-	-
max	0.12	0.80
356835	0,08	0.25

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

Heats fully killed

AL(GES) - 0,005% >= 2 X N

2263/ 3402

0000023-00031/00066

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 3 / 6 Date: 07.11.2012

(C71)

HEAT CHEMICAL ANALYSIS

EF3 = V + NB MAX 0,100 = S 0,077 / K 0,076 / K 0,076

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.250	-	-	-	-	-	-	-	-
max		0.140	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
356835		0.123	0.285	1.40	0.024	0.0006	0.030	0.029	0.107	0.109	0.011
356835		0.118	0.284	1.40	0.024	0.0006	0.030	0.029	0.108	0.109	0.011

(B07.1) Heat	(C00.1) Test Piece	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.080	0.0200	0.0150	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100
356835		0.043	0.0026	0.0010	0.003	0.033	0.0088	0.001	0.0001	0.0016	0.0010
356835		0.043	0.0026	0.0010	0.003	0.033	0.0078	0.001	0.0001	0.0016	0.0010

(B07.1) Heat	(C00.1) Test Piece	CQ 03 %	CQ 08 %	EF 02 %	EF 10 %						
min		-	-	-	-						
max		.43	.25	0.12	0.8						
356835		.40	.22	0.08	0.3						
356835		.39	.21	0.08	0.3						

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

1273436/3

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

0000023-0003/000656

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 4 / 6 Date: 07.11.2012

TENSILE TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	ReH MPa	R_m MPa	$5.65\sqrt{So}$ %	R/R_m -					
min		-	355	460	22.0	-					
max		-	-	620	-	-					
356835	788	19.97X09.42	357	505	34.5	0.71					

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	$R_{t0,5}$ MPa	R_m MPa	2" %	R/R_m -					
min		-	360	460	23.5	-					
max		-	530	760	-	-					
356835	788A	25.47X09.46	361	510	42.5	0.71					

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 40 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	35.0	35.0	35.0	50.0					
max		-	-	-	-	-					
356835	788	0.600	184	180	175	180					

12734367.

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 3/4
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 5 / 6 Date: 07.11.2012

IMPACT TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	27.0	27.0	27.0	38.0					
max		-	-	-	-	-					
356835	788A 1)	0.600	269	265	246	260					

TEST MATERIAL MARKED BY 1) ANNEALED AS FOLLOWS:
920 DEGREES C - 5 MIN. AIR.

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT		5 MIN 920 DEGREES C AIR	
HEAT TREATMENT	NORMALIZED		
HYDROSTATIC TEST	205 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
REQUIREMENTS OF IMPACT TEST REFER TO STANDARD-SIZE SPECIMEN			
HARDNESS TEST	HRC MAX. 22 IN ACC. TO NACE MR 01-75		

ULTRASONIC TESTING FOR LONGITUDINAL DEFECTS
ACC. TO EN 10893-10,KL.U2/C,INSIDE AND OUTSIDE
: SATISFACTORY
ULTRASONIC TESTING FOR LAMINATIONS ACC TO EN 10893-8,
KL.U3 :SATISFACTORY

(A04, B06)

MARKING, IDENTIFICATION

1 2 7 3 4 3 6 / 3

7

DIE STAMPED ON ONE SIDE WITH ROUND NOSE TOOLS MANUFACTURER'S MARK HEAT-NO. S355G15 +N/L360N MOD/X52N MOD/355EM MOD WA INSPECTOR'S SIGN PAINT STENCILED ON ONE SIDE COLOUR FREE OFF PB,ZN,CU,SN AND CD P.O.-NO. SS69824 V&M ITEM-NO 7 168,3 X 9,52 TUBE/PIPE LENGTH M TERMS OF DELIVERY EN 10225 S355G15 +N/L360N MOD/X52N MOD/355EM MOD PIPE NO. (TALLY-NR.) HEAT-NO. MANUFACTURER'S NAME LONGITUDINAL COLOUR STRIPE WITH PART OFF FRONT FACE ACC. PICTURE 4 EN10225:2001 BLUE BLUE

Enclosures

TALLY LIST SEE APPENDIX

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 21501Mu12 (A03) Page: 6 / 6 Date: 07.11.2012

(Z01)
The supplied products are in compliance with the requirements of the order

(A05, Z02, Z03, Z04)

Date	07.11.2012	04 DEC 2012
Validated by	Inspection Representative	Third Party Representative
	DEYMANN D. Deymann	Lloyd's Register EMEA M. Mielke Business Centre Central Dortmund Lloyd's Register
☎	(0208) 810-4650	
🖷	(0208) 810-5659	
@	DIETER.DEYMANN@VMTUBES.DE	
Stamp		

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

1273438/3

0000023-00035/00086

S T U E C K L I S T E / T A L L Y L I S T /
L I S T E D E T A I L L E

Blatt-Nr./Page-No./
Page-Nr. : 1

Auftrag/Works-Order/Commande
852 9461 1 / 7

Besteller/Customer/
Client

Warenempfaenger/Consignee/
Destinaitre des Marchanises

Abmessung/Size/Dimension
168,30 x 9,52

Norm/Standard/Norme
EN 10225

Bestimmungsland/Country/Pays

Werkstoff/Material/
Materiaux
S355G15

Schmelze/Heat-No./
Numero de coule
356835

Best.-Nr./Order-No./
Numero de commande client
SS69824

Rohrart/Pipe-Spec./Type de Tubes
NAHTLOSE ROHRE / SEAMLESS STEEL PIPE / TUBES SANS SOUDURE

Rohr-Nr Pipe-No Nr.Tube	Laenge Length Longueur (Meter)	Gewicht Weight Poids (KG)	Los-Nr Lot-No Lot-No	Rohr-Nr Pipe-No Nr.Tube	Laenge Length Longueur	Gewicht Weight Poids	Los-Nr Lot-No
1	10,897	424,0					
2	11,333	435,5					
3	11,077	428,0					
4	11,165	426,0					
5	10,909	425,0					
6	11,079	426,5					
7	11,754	449,5					
8	11,709	452,0					
9	11,527	438,0					
10	10,238	400,5					
11	11,739	454,5					
12	11,753	453,5					
13	11,744	453,0					
14	11,058	426,5					
15	11,419	444,5					
16	11,191	429,0					
17	10,852	423,5					
18	10,610	405,0					
19	10,456	409,5					
20	10,477	408,0					
21	10,331	403,5					
22	10,633	413,0					
23	11,041	430,5					
24	10,151	398,5					
25	11,204	433,0					
26	10,528	409,5					

Summen/Totals/Total	: Blatt/Page/Page	Akkumuliert/Accumulated/ Total cumule
Stueck /Pieces/Pieces	: 26	26
Laenge /Length/Longueur (Meter)	: 286,875	286,875
Gewicht/Weight/Poids (KG)	: 11100,00	11100,00

12734981

S T U E C K L I S T E / T A L L Y L I S T /
L I S T E D E T A I L L E

Auftrag/Works-Order/Commande	Besteller/Customer/ Client	Warenempfaenger/Consignee/ Destinaitre des Marchanises
852 9461 1 / 7		
Abmessung/Size/Dimension 168,30 x 9,52	Norm/Standard/Norme EN 10225	Bestimmungsland/Country/Pays
Werkstoff/Material/ Materiaux S355G15	Schmelze/Heat-No./ Numero de coule 356835	Best.-Nr./Order-No./ Numero de commande client SS69824

Rohrart/Pipe-Spec./Type de Tubes
NAHTLOSE ROHRE / SEAMLESS STEEL PIPE / TUBES SANS SOUDURE

Chargensummen

Charge	Stck	KG	lbs	Meter	Feet
356835	26	11100,0		286,875	

12734619

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 1 / 6 Date: 25.03.2013

(A01) **V&M DEUTSCHLAND GmbH**	(A09.1) **V&M-Order-No.** 85297643 (A09.2) **Suborder**
(A06.1) Customer	
(A06.2) Orderer	(A07.2) **Order-No.** SS70266 **Date** 05.10.2012
(A06.3) **Client's Client**	(A07.3) **Order-No.** V4489

(B01, B02, B04) **Description of the product**	STRUCTURAL PIPE AND TUBING SEAMLESS RL AT THE UPPER LIMIT **ENDS BEVELLED, ANGLE 30 DEGREES** (TOLERANCE +5/-0 DEGREES), ROOT FACE 1,6 +/- 0,8 MM INSIDE WITHOUT RUST PROTECTION **OUTSIDE DRY VARNISH** IN BUNDLES OF MAX. 3000 KG EN 10225:2009 **-SPEC. MIM/002/07/008, REV. 14 (22TH MARCH 2012)** ISO 3183:2007 (MODIFIED) / API 5L (OCTOBER 2007) BS 7191:1989 / NORSOK MDS - Y22 REV. 5 (JUNE 2007) ANSI/NACE MR 0175/ISO 15156-2:2009 S355G15 +N / L360N MOD. PSL 2 (X52N MOD. PSL 2) / GRADE 355EM MOD. FULLY KILLED-FINE GRAINED DTM ~~1274168~~ LLOYD'S REGISTER NO. DTM
(A10) **Inspection by LLOYD'S REGISTER EMEA**	1 2 7 4 7 6 8 / 1

(A13) **V&M Item**	(A09) **Cust. Item**	(B14) **Item text**	(B09) **Dimensions**	(B10) **Single length**
11			O.D. 168,3 MM X WTH. 9,52 MM	IN RANDOM MILL LENGTH 8000 - 12000 MM

0000015-00012/00042

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 2 / 6 Date: 25.03.2013

(A13) V&M Item	(A09) Cust. Item	(B08) Quantity	(B11) Total length m	(B13) Weight kg
11		29	328,62	12.847

LLOYD'S REGISTER NO. DTM

12747681

V&M Item	Delivery Note-No	Packing list-No
11	47433	

(C71)

HEAT CHEMICAL ANALYSIS

(B07.1) Heat	(B15) Process	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min	-	-	0.150	-	-	-	-	-	-	-	-
max	-	0.140	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
375623	Oxygen (BOF)	0.120	0.220	1.42	0.014	0.0006	0.037	0.020	0.040	0.040	0.010

ITEM 1020

(B07.1) Heat	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %	CQ 03 %	CQ 08 %
min	-	-	-	-	-	-	-	-	-	-	-	-
max	0.080	0.0200	0.0150	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100	.43	.25
375623	0.060	0.0040	0.0020	0.004	0.019	0.0121	0.001	0.0002	0.0011	0.0030	.38	.21

(B07.1) Heat	EF 02 %	EF 10 %
min	-	-
max	0.12	0.80
375623	0.08	0.11

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

Heats fully killed

AL(GES) - 0,005% >= 2 X N

0000015-00014/00042

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 3 / 6 Date: 25.03.2013

(C71)

HEAT CHEMICAL ANALYSIS

EF3 = V + NB MAX 0,100 = S 0,079 / K 0,075 / K 0,080

(C72)

PRODUCT CHEMICAL ANALYSIS

(B07.1) Heat	(C00.1) Test Piece	C %	Si %	Mn %	P %	S %	Al %	Cu %	Cr %	Ni %	Mo %
min		-	0.150	-	-	-	-	-	-	-	-
max		0.140	0.450	1.60	0.025	0.0070	0.060	0.350	0.250	0.300	0.080
375623		0.133	0.214	1.45	0.016	0.0005	0.034	0.021	0.035	0.042	0.006
375623		0.115	0.198	1.44	0.013	0.0024	0.039	0.029	0.037	0.041	0.002

(B07.1) Heat	(C00.1) Test Piece	V %	As %	Sn %	Ti %	Nb/Cb %	N %	Pb %	B %	Ca %	Bi %
min		-	-	-	-	-	-	-	-	-	-
max		0.080	0.0200	0.0150	0.020	0.040	0.0140	0.010	0.0005	0.0050	0.0100
375623		0.059	0.0027	0.0010	0.003	0.016	0.0132	0.001	0.0001	0.0015	0.0016
375623		0.063	0.0032	0.0010	0.002	0.017	0.0106	0.001	0.0001	0.0022	0.0012

(B07.1) Heat	(C00.1) Test Piece	CQ 03 %	CQ 08 %	EF 02 %	EF 10 %
min		-	-	-	-
max		.43	.25	0.12	0.8
375623		.40	.22	0.08	0.1
375623		.38	.20	0.08	0.1

CQ 03	CEV/CE = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15
CQ 08	CE(PCM)= C + SI/30 + (MN+CU+CR)/20 + NI/60 + MO/15 + V/10 + 5B
EF 02	EF = V + TI + NB
EF 10	EF = CR + MO + NI + CU

LLOYD'S REGISTER NO DTM

1274768 / 1

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

0000015-00015/00042

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 4 / 6 Date: 25.03.2013

TENSILE TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	$R_{p0,5}$ MPa	R_m MPa	$5,65\sqrt{So}$ %	R/R_m -					
min		-	355	460	22.0	-					
max		-	-	620	-	0.88					
375623	763	20.07X09.97	358	492	32.0	0.73					

TENSILE TEST RESULTS

Type (C10.1)	TUBE STRIP TEST SPECIMEN
Test temperature (C03)	ROOM TEMPERATURE
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C10) Dimension	(C11) YS	(C12) TS	(C13) Elong.	(C14.1) Ratio					
		mm	$R_{p0,2}$ MPa	R_m MPa	2" %	R/R_m -					
min		-	355	460	23.5	-					
max		-	530	760	-	0.93					
375623	763A	25.47X09.55	368	511	38.5	0.72					

IMPACT TEST RESULTS

Type (C40)	Charpy-V
Test temperature (C03)	- 40 DEGREES C
Direction (C02)	longitudinal

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	35.0	35.0	35.0	50.0					
max		-	-	-	-	-					
375623	763	0.600	188	199	186	191					

LLOYD'S REGISTER NO. DTM
1274768 / 1

IMPACT TEST RESULTS

Type (C40)	CHARPY-V 1/2
Test temperature (C03)	- 50 DEGREES C
Direction (C02)	transverse

0000015-00016/00042

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 5 / 6 Date: 25.03.2013

IMPACT TEST RESULTS

(B07.1) Heat	(C00.1) Test Piece	(C41)	(C42.1) Impact1	(C42.1) Impact2	(C42.1) Impact3	(C43.3) Mean					
		qcm	J	J	J	J					
min		-	27.0	27.0	27.0	38.0					
max		-	-	-	-	-					
375623	763A	0.400	60,0	57,0	56,0	57,3					

(D55)

OTHER TESTS ON PIPE

Test	Conditions	Test rate	Result
HEAT TREATMENT		5 MIN 920 DEGREES C AIR	
HEAT TREATMENT	NORMALIZED		
HYDROSTATIC TEST	205 BAR (1BAR=100KPA), HOLDING TIME 5 SEC.	EACH PIPE/ TUBE	NO LEAKAGE
APPEARANCE AND DIMENSIONS (D01)		EACH PIPE/ TUBE	SATISFACTORY
HARDNESS TEST	HRC MAX. 22 IN ACC. TO NACE MR 01-75		

ULTRASONIC TESTING FOR LONGITUDINAL DEFECTS
ACC. TO EN 10893-10,KL.U2/C,INSIDE AND OUTSIDE
: SATISFACTORY
ULTRASONIC TESTING FOR LAMINATIONS ACC TO EN 10893-8,
KL.U3 :SATISFACTORY

(A04, B05)

MARKING, IDENTIFICATION

11

DIE STAMPED ON ONE SIDE WITH ROUND NOSE TOOLS MANUFACTURER´S MARK HEAT-NO. S355G15 +N/L360N MOD/X52N MOD/355EM MOD WA INSPECTOR´S SIGN PAINT STENCILED ON ONE SIDE COLOUR FREE OFF PB,ZN,CU,SN AND CD P.O.-NO. SS70266 V&M ITEM-NO 11 168,3 X 9,52 TUBE/PIPE LENGTH M TERMS OF DELIVERY EN 10225 S355G15 +N/L360N MOD/X52N MOD/355EM MOD PIPE NO. (TALLY-NR.) HEAT-NO. MANUFACTURER´S NAME LONGITUDINAL COLOUR STRIPE WITH PART OFF FRONT FACE ACC. PICTURE 4 EN10225:2001 BLUE BLUE

Enclosures

TALLY LIST SEE APPENDIX

LLOYD'S REGISTER NO. DTM

12747688 / 1

(Z01)

The supplied products are in compliance with the requirements of the order

0000015-00017/00042

V&M DEUTSCHLAND GmbH (A01) Werk Mülheim Rohrkontistraße Schützenstrasse 124 45476 Mülheim an der Ruhr	VALLOUREC & MANNESMANN TUBES Vallourec Group	INSPECTION CERTIFICATE (A02) 3.2 EN 10204:2004 No. : 27508Mu13 (A03) Page: 6 / 6 Date: 25.03.2013

(A05, Z02, Z03, Z04)

Date	25.03.2013	15 APR 2013
Validated by	Inspection Representative	Third Party Representative
	DEYMANN D. Deymann	
☎	(0208) 810-4650	
🖷	(0208) 810-5659	
@	DIETER.DEYMANN@VMTUBES.DE	
Stamp		Lloyd's Register EMEA M. Mielke Business Centre Central Dortmund Lloyd's Register

Indication in parentheses correspond to attributes according to EN 10168

This testimonial and certification respectively may neither be modified nor used for other products. Offences are regarded as falsification of documents and will be subject to criminal prosecution.

LLOYD'S REGISTER NO. DTM

1274768/1

0000015-00018/00042

VALLOUREC & MANNESMANN TUBES

Continuous Mandrel Mill MH

V&M Order No.: V&M Auftrag No.de Commande	852 / 9764 3	**Pos.-Nr.:** Item-No.	011
Customer: Kunde/Client		**P.O. Nr.** No.	SS70266
User: Verwender/		**P.O. Nr:** No.	
Adresse: Warenempfänger/adresse			
Destination: Bestimmungsland			

Tally - List
Rohr Liste / List De Colisage

PROJECT:

Dimension

Outside Diameter - Wall Thickness
Aussendurchmesser/Diametre Exterieur - Wanddicke/Expaisseur

168,3 X 9,52 mm

S355G15

No of pieces Anzahl / Nombre de pieces	Length Länge/ Longeur (m)	Length Länge/ Longeur (ft)	Weight Gewicht/Poids (kg)	Weight Gewicht/Poids (lbs)
29	328,62	1078,15	12847	28323

LLOYD'S REGISTER MO. BFM
1274768 / 1

2276/ 3402

VMD Order	Item no.	Grade	Dimension
862 / 9764 3	011	S355G15	168,3 X 9,52 mm

Pipe-no. Rohr/Tube	Lenght/Länge/Longueur (m)	(ft)	Weight/Gewicht/Poids (kg)	(lbs)	Heat-no. No.de Coulee	Lot-no.
32	11,836	38,832	460,0	1.014,1	375623	0000
33	11,341	37,208	451,5	995,4	375623	0000
34	11,359	37,267	439,0	967,8	375623	0000
35	11,784	38,661	460,0	1.014,1	375623	0000
36	11,788	38,675	454,5	1.002,0	375623	0000
37	11,790	38,681	457,0	1.007,5	375623	0000
38	11,513	37,772	446,5	984,4	375623	0000
39	11,513	37,772	448,0	987,7	375623	0000
40	11,517	37,785	449,0	989,9	375623	0000
41	11,871	38,947	460,0	1.014,1	375623	0000
42	11,262	36,949	441,0	972,2	375623	0000
43	10,929	35,856	430,5	949,1	375623	0000
44	11,089	36,381	433,5	955,7	375623	0000
45	10,799	35,430	424,5	935,9	375623	0000
46	10,758	35,295	421,0	928,1	375623	0000
47	10,961	35,961	432,0	952,4	375623	0000
48	10,398	34,114	407,0	897,3	375623	0000
49	11,232	36,850	439,0	967,8	375623	0000
50	10,923	35,837	431,0	950,2	375623	0000
51	11,228	36,837	436,5	962,3	375623	0000
52	11,017	36,145	433,0	954,6	375623	0000
53	11,046	36,240	432,5	953,5	375623	0000
54	11,696	38,373	455,0	1.003,1	375623	0000
55	11,695	38,369	455,0	1.003,1	375623	0000
56	11,851	38,881	465,5	1.026,3	375623	0000
57	11,840	38,845	459,5	1.013,0	375623	0000
58	11,040	36,220	431,5	951,3	375623	0000
59	11,861	38,914	466,5	1.028,5	375623	0000
60	10,675	35,023	426,5	940,3	375623	0000

LLOYD'S REGISTER NO. DTM

127476 8 / 1

Project:

Client: TENARIS DALMINE S.p.A.
DALMINE (BERGAMO) - ITALY

Office: MILAN

Clients Order Number: R80-5511065685

Date: 30 January 2020

Order Status: COMPLETE

Inspection Dates
First: 31 October 2019

Final: 30 January 2020

This certificate is issued to TENARIS DALMINE S.p.A. Piazza Caduti 6 Luglio 1944 No. 1 - 24044 DALMINE (BERGAMO) - Job 1280215

The material described herein has been satisfactorily inspected at their works of Dalmine – Bergamo.

SEAMLESS HOT FINISHED PIPES (WITH EXTRA REQUIREMENTS)
ACCORDING TO API 5L – PSL2 – 46TH ED – ISO 3183 PSL2 ED.2012, EN10225, NACE MR 0175,
MR0103 +TQ 20038865/V2.2 - NORSOK STD.M120 (ED.5, NOVEMBER 2008) –MDS-Y47 GR.S460G6+QT
STEEL Gr. X65 Q PSL2/L4500Q PSL2, S460G6 +QT EN10255
AS PER TENARIS INSPECTION CERTIFICATES BELOW REPORTED:

JOB ITEM No.	WEIGHT Kg	QT.Y mt	DIMENSION mm	INSPECTION CERTIFICATES No.
001	12.812	235,41	O.D. 168,30 x W.T. 14,27 mm	01/19/15224(sh. 1 to 9)
002	16.507	212,08	O.D. 168,30 x W.T. 21,95 mm	01/19/16111(sh. 1 to 9)
003	17.791	67,60	O.D. 610,00 x W.T. 19,05 mm	01/19/16458(sh. 1 to 10)

The following scope of inspection was satisfactorily carried out against job and specification requirements:

- Test specimens selected and identified by Inspector Personal stamp;
- Witnessed mechanical tests;
- Reviewed chemical analysis;
- Witnessed visual and dimensional examination;
- Reviewed/Endorsed manufacturer inspection certificates.

For identification purpose each pipe, in addition to required marking, has been hard stamped with Inspector's personal and society's stamps FS-LR.

F. SERVALLI
Inspector to Lloyd's Register EMEA

FS

A subsidiary of Lloyd's Register Group Limited

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as Lloyd's Register. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity, for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

+ 39 035 560 111 tel
+ 39 035 560 3827 fax

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: **01-19-15224**
Page / Seite: **1 / 9**
Date / Datum: **December 13, 2019**

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	R80-5511065685	.	1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

DELIVERY NOTES / LIEFERSCHEINE

Delivery Notes / Lieferscheine	Delivery Notes / Lieferscheine
Job Number: 0031251264 / 000010 Shipping note: Address: Mesdaglaan 2	Town: 2951 P ALBLASSERDAM Country: The Netherlands

TENSILE TEST / ZUGVERSUCH

PRS1110023734

TEM 980

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Lot N° / Los Nr.	Specimen condition Probenform Ls	Sc	Type Typ	Ori	Specimen dimensions Probengroesse Size abmessung	Area Flaeche	Test temp entempe	Y.S. ReH	U.T.S. Req.	Y.S./U.T.S	Elongation / Bruchdehnung Lo	Min.	Min.	Obt.
										Min: 460.00 Max: 580.00	Min: 550.00 Max: 700.00	Req. Max. 0.90	5D = 5.65√So			
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
995154	Z6381	5	B	QT	Ss	L	19.85 x 14.50	288.60	+20	500.00	560.00	0.89	5D	95.0	19.0%	23.5%

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Monitored Reviewed
Francesco Servalli - Inspector
Milan Office

B: Body / Koerper
L: Longitudinal / Laengs
Lo: Initial length / Anfangslaenge
Ls: Location of sample / Probenentnahme
Max: Maximum / Maximal
Min: Minimum / Minimal
Obt: Obtained / Erhalten
Ori: Orientation / Richtung
QT: Quenched and tempered / Vergutet
Req. Max: Required maximum / gef. Hoechstwert
Req: Required / Gefordert
Sc: Specimen condition / Probenzustand
Ss: Strip specimen / Streifenprobe
U.T.S: Ultimate Tensile Strength / Aeusserste Streckgrenze
Y.S: Yield Strength / Streckgrenze

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Dalmine S.p.A. - Dalmine Plant
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24044 Dalmine (BG) Italy

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+ 39 035 560 3827 fax

INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: **01-19-15224** | Page / Seite: **2 / 9**

Date / Datum: **December 13, 2019**

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr :	Manufacturer's Works Order N° / Auftrags-Nr.:
	R80-5511065685	.	1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

TENSILE TEST / ZUGVERSUCH

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Lot N° / Los Nr.	Specimen condition Probenform: Ls	Sc	Type / Typ	Ori	Specimen dimensions Probengroesse: Size abmessung mm	Area Flaeche mm2	Test temp entempe °C	Y.S. EUL 0.5% Min: 450.00 Max: 600.00 MPa	U.T.S. Req. Min: 535.00 Max: 760.00 MPa	Y.S./U.T.S Req. Max. 0.93	Elongation / Bruchdehnung: Lo cal.	Min. mm	Min. %	Obt. %
995154	Z6381	5	B	QT	Ss	L	25.36 x 14.87	378.90	+20	506.00	587.00	0.86	2"	50.8	22.0%	28.5%

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Obtained Reviewed
Francesco Servalli - Inspector
Milan Office

B: Body / Koerper
L: Longitudinal / Laengs
Lo: Initial length / Anfangslaenge
Ls: Location of sample / Probenentnahme
Max: Maximum / Maximal
Min: Minimum / Minimal
Obt: Obtained / Erhalten
Ori: Orientation / Richtung
QT: Quenched and tempered / Vergutet
Req. Max: Required maximum / gef. Hoechstwert
Req: Required / Gefordert
Sc: Specimen condition / Probenzustand
Ss: Strip specimen / Streifenprobe
U.T.S: Ultimate Tensile Strength / Aeusserste Streckgrenze
Y.S: Yield Strength / Streckgrenze

CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

Composition % / Zusammensetzung %

Heat N° / Charge Nr.	Sample N° / Probe Nr.	Lot N° / Los Nr.		C x100	Mn x100	Si x100	Ni x100	Cr x100	Mo x100	Cu x100	Ce LF x100	PCM x100	F1 x100	F2 x100	F3 x100	F4 x100	F5 x100	F6 x100	P x1000	S x1000	Sn x1000	Al x1000	Ti x1000	Nb x1000	V x1000	As x1000	N x10000	B x10000	Ca x10000	Sb x10000
			H Max	16	165	45	50	30	25	30	42	22	10	12	80	1	1	–	20	3	20	60	40	50	90	20	140	5	50	100
			Min	–	100	15	–	–	–	–	–	–	–	–	–	–	–	200	–	–	–	–	–	–	–	–	–	–	–	–
			P Max	16	165	45	50	30	25	30	42	22	10	12	80	1	1	–	20	3	20	60	40	50	90	20	140	5	50	100
			Min	–	100	15	–	–	–	–	–	–	–	–	–	–	–	200	–	–	–	–	–	–	–	–	–	–	–	–
995154			H	9	114	25	15	17	13	13	36	19	5.2	5.4	58	0	0	800	11	1	10	32	2	22	30	6	40	1	15	23
995154	Z6381	5	P	9	116	25	15	17	13	14	37	19	5.2	5.4	59	0	0	1 100	11	1	10	33	2	22	30	6	30	1	11	24

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INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer: **01-19-15224**
Page / Seite: **3 / 9**
Date / Datum: **December 13, 2019**

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.: **R80-5511065685**	Customer's Reference / Kunden Referenz-Nr.: .	Manufacturer's Works Order N° / Auftrags-Nr.: **1280215/001**
Manufacturing Process / Herstellungsprozess: **QUENCHED & TEMPERED VERGUETET**	Product Type / Art des Produkts: **SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)**		Surface / Oberflaeche: **BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT**
Standard or Specification / Norm oder Spezifikation: **See note nr.1 Sehen Sie Anmerkung nr.1**		Steel Grade / Werkstoff: **See note nr.2 Sehen Sie Anmerkung nr.2**	Ends / Enden: **BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825**
Dimensions / Abmessung: **ø 6.626" O.D. x .562" W.T. ø 168.30mm O.D. x 14.27mm W.T.**	Schedule / Schedule : . .	Length / Laenge : **32.808 ft ÷ 39.370 ft 10000 mm ÷ 12000 mm**	Quantity / Menge: **21Pcs/Pz** **772'04" ft 28245,5 lb 235.41 mt 12812 kg**	Nominal Weight / Theor. Gewicht: **36.42 lb/ft 54.20 Kg/m**

CHEMICAL COMPOSITION / CHEMISCHE ZUSAMMENSETZUNG

				Composition % / Zusammensetzung %																										
				X 100														X 1000								X 10000				
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	F4	F5	F6	P	S	Sn	Al	Ti	Nb	V	As	N	B	Ca	Sb
			H Max	16	165	45	50	30	25	30	42	22	10	12	80	1	1	--	20	3	20	60	40	50	90	20	140	5	50	100
			Min	--	100	15	--	--	--	--	--	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--	--	--
Heat N°	Sample N°	Lot N°	P Max	16	165	45	50	30	25	30	42	22	10	12	80	1	1	--	20	3	20	60	40	50	90	20	140	5	50	100
Charge Nr.	Probe Nr.	Los Nr.	Min	--	100	15	--	--	--	--	--	--	--	--	--	--	--	200	--	--	--	--	--	--	--	--	--	--	--	--
995154	Z6382/C	5	P	8	116	25	15	17	13	13	36	18	5.2	5.4	58	0	0	888.89	11	1	10	32	2	22	30	6	36	1	11	24

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V)
F2: (Nb+V +Ti)
F3: (Cr+Mo+Ni+Cu)
F4: (Pb)
F5: (Bi)
F6: (Al/N)
H: Heat / Charge
Max: Maximum / Maximal
Min: Minimum / Minimal
P: Product /Produkt
PCM: C+V/10+Mo/15+(Mn+Cu+Cr)/20+Si/30+Ni/60+5B

THROUGH WALL HARDNESS / HAERTE IN DER WANDSTAERKE

			Required values / Geforderte Werte	Individuals / Einzel			Average / Durchschnitt			Hardness type / Haertetyp vickers																Formula applied / Angewendete Formel
				Min: –	Max: 248.0	Var: –	Min: –	Max: –	Var: –	Minimum martensite / Minimum Martensit : (%): –																
Heat N°	Sample N°	Lot N°	Specimen condition			Quad.	Scale	OD						MW					ID							
Charge Nr.	Probe Nr.	Los Nr.	Ls	Sc			Skala	1	2	3	4	Dist. (mm)	Avg.	1	2	3	4	Avg.	1	2	3	4	Dist. (mm)	Avg.		
995154	Z6381	5	B	QT		1	HV10	179.0	182.0	191.0	192.0	- 1.50	186.0	191.0	181.0	188.0	180.0	185.0	192.0	184.0	192.0	191.0	1.5	189.8		

Avg: Average / Durchschnitt
B: Body / Koerper
ID: Internal Diameter / Innendurchmesser
Ls: Location of sample / Probenentnahme
MW: Middle Wall / Mitte wand
OD: Outside Diameter / Aussendurchmesser
Sc: Specimen condition / Probenzustand
Var: Variation / Abweichung

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Reviewed
Francesco Servalli - Inspector
Milan Office

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INSPECTION CERTIFICATE
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Number / Nummer:	Page / Seite:
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Date / Datum: **December 13, 2019**

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	R80-5511065685	.	1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

THROUGH WALL HARDNESS / HAERTE IN DER WANDSTAERKE

Dist: Distance from outer diameter / Abstand zum aeusseren Durchmesser	Max: Maximum / Maximal Min: Minimum / Minimal	QT: Quenched and tempered / Vergueted Quad: Quadrant / Quadrant

IMPACT TEST / KERBSCHLAGPROBE

Type/Typ: KCV				Orientation/Richtung: T		Unit / Einheit: JOULE				Shear area / Scherbereich %			
Position/Position:				Temp: 0		Unit/Einheit: °C	Ind.Min.Req: 20		Req.Min.Avg: 27	Ind.Min.Req: --		Req.Min.Avg: --	
Heat N°	Sample N°	Zone	Lot N°			Size / Abmessung	Results / Ergebnis				Results / Ergebnis		
Charge Nr.	Probe Nr.	Zone	Los Nr.	Ls	Sc	mm	1	2	3	Avg.	1	2	3	Avg.
995154	Z6381	outside	5	B	QT	10 x 10.00	432.0	396.0	426.0	418.0	100	100	100	100

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Milan Office

Avg: Average / Mittelwert	mindestens gef. Einzelwert	Req. Min. Avg: Required minimum average / mindestens gef. Mittelwert
B: Body / Koerper	Ls: Location of sample / Probenentnahme	T: Transversal / Quer
Ind. Min. Req: Individual Minimum Required /	QT: Quenched and tempered / Verguetet	Temp: Temperature / Temperatur Sc: Specimen condition / Probenzustand

Type/Typ: KCV				Orientation/Richtung: T		Unit / Einheit: JOULE				Shear area / Scherbereich %			
Position/Position:				Temp: - 50		Unit/Einheit: °C	Ind.Min.Req: 45		Req.Min.Avg: 60	Ind.Min.Req: --		Req.Min.Avg: --	
Heat N°	Sample N°	Zone	Lot N°			Size / Abmessung	Results / Ergebnis				Results / Ergebnis		
Charge Nr.	Probe Nr.	Zone	Los Nr.	Ls	Sc	mm	1	2	3	Avg.	1	2	3	Avg.
995154	Z6381	outside	5	B	QT	10 x 10.00	445.0	430.0	438.0	438.0	100	100	100	100

Avg: Average / Mittelwert	mindestens gef. Einzelwert	Req. Min. Avg: Required minimum average / mindestens gef. Mittelwert
B: Body / Koerper	Ls: Location of sample / Probenentnahme	T: Transversal / Quer
Ind. Min. Req: Individual Minimum Required /	QT: Quenched and tempered / Verguetet	Temp: Temperature / Temperatur Sc: Specimen condition / Probenzustand

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Date / Datum: **December 13, 2019**

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	R80-5511065685		1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

HYDROSTATIC TEST / WASSERDRUCKPROBE

Pressure / Druck		Time / Zeit	Results / Ergebnis
Unit / Einheit.	Value / Wert	Seconds / Sekunden	
MPa	20.7	5	Satisfactory / Zufriedenstellend

SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

STANDARD EDITIONS
AUSGABE NACH

Standard:API 5L Year:2018 Revision:46° Revision year:....	Standard:API 5L Jahr:2018 Neuausgabe:46° Neuausgaben-Jahr:....
Standard:ISO 3183 Year:2007	Standard:ISO 3183 Jahr:2007
Standard:EN 10225 Year:2009	Standard:EN 10225 Jahr:2009
Standard:NACE MR0175/ISO 15156 Year:2015	Standard:NACE MR0175/ISO 15156 Jahr:2015

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Milan Office

PRODUCT DESCRIPTION NOTES
PRODUKT-BESCHREIBUNGS-ANMERKUNGEN

Note 1 is the full description of the 'Standard or specification'	Anmerkung 1 ist die volle Beschreibung des 'Norm oder Spezifikation'
ACC. TO THE NORM API 5L PSL2 46TH ED., ISO 3183 2012 PSL2, EN 10225, NACE MR 0175, MR0103 + TQ 20038865 V2.2	SPEZ. API 5L PSL2 46 ED., ISO 3183 2012 PSL2, EN 10225, NACE MR 0175, MR0103 + TQ 20038865 V2.2
Note 2 is the full description of the 'Steel grade'	Anmerkung 2 ist die volle Beschreibung des 'Werkstoff'
STEEL GR. X65 Q PSL2/L450Q PSL2, S460G6+QT EN 10225	WERKSTOFF X65 Q PSL2/L450Q PSL2, S460G6+QT EN 10225

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Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED **VERGUETET**	**SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS)** **NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **INNEN ROH, AUSSEN GEOELT**

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 **Sehen Sie Anmerkung nr.1**	**See note nr.2** **Sehen Sie Anmerkung nr.2**	**BEVEL API 5L / ISO 3183 CT4:8825** **MIT FASE GEM. API 5L / ISO 3183 CT4:8825**

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: **21Pcs/Pz**	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	-	**32.808 ft ÷ 39.370 ft**	**772'04" ft** **28245,5 lb**	**36.42 lb/ft**
ø 168.30mm O.D. x 14.27mm W.T.	-	**10000 mm ÷ 12000 mm**	**235.41 mt** **12812 kg**	**54.20 Kg/m**

SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

Supplementary Information Zusaetzliche Informationen	
Country of melt ITALY Continuous casting and Fully killed Quantity detail for heat: please see tally-list SHORT PIPE ACCEPTED WITH C.R. N.4688 dated 06.11.2019	Country of melt ITALY Continuous casting and Fully killed Quantity detail for heat: please see tally-list

Supplementary Information Zusaetzliche Informationen	
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 30 GAUSS HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156 HARDNESS HBW 225 MAX, ACCORDING TO NACE MR0103/ISO 17945 PIPES HAVE BEEN QUENCHED AND TEMPERED: AUSTENITIZING TEMP. AT 920 °C FOR 15 MINS, QUENCHED IN WATER AND TEMPERED AT 665 °C FOR 35 MINS. THE WALL THICKNESS, CONTROLLED BY U.T., OF EACH PIPE IS WITHIN THE REQUESTED TOLERANCE ISO 10893-12 ALL PIPES HAVE BEEN TESTED FOR LAMINATION DETECTION BY U.T., WITH SATISFACTORY RESULT ISO 10893-8/U3 THE ENDS (FOR 300 mm) HAVE BEEN TESTED WITH WET FLUORESCENT MAGNETIC PARTICLES, WITH SATISFACTORY RESULT ALL PIPES HAVE BEEN TESTED BY ULTRASONIC INSPECTION FOR TRANSVERSAL/LONGITUDINAL INSIDE/OUTSIDE DEFECTS (NOTCH 5,0 %) ACCORDING TO SPEC.ISO 10893-10 U2/C WITH SATISFACTORY RESULT	NACH DER KONTROLLE IST DER RESTMAGNETISMUS NICHT GROESSER ALS 30 GAUSS DIE HAERTE IST NICHT MEHR ALS HRC 22 MAX, LAUT NACE MR0175/ISO 15156 DIE HAERTE IST NICHT MEHR ALS HBW 225 MAX, LAUT NACE MR0103/ISO 17945 ALLE ROHRE WURDEN WIE FOLGT VERGUETET: 15 MINS LANG ERHITZT A UF 920 C - IN WASSER ABGEKUEHLT UND 35 MINS LANG AUF 665C ANGELASSE DIE WANDDICKE WURDE MIT ULTRASCHALL; SIE ENTSPRICHT DEN GEFORDERTEN TOLERANZEN ISO 10893-12 DIE ROHRE WURDEN AUF WANDSTAERKENDOPPLUNG UNTERSUCHT OHNE BEANSTANDUNGEN ISO 10893-8/U3 DIE ROHRENDEN (300 mm) WURDEN MITTELS FLUORESZIERENDER MAGNETPULVERPRUEFUNG OHNE BEANSTANDUNG GEPRUEFT ALLE ROHRE WURDEN DER ZERSTOERUNGSFREIEN PRUEFUNG QUER/LAENGS INNERE/AEUSSERE FEHLER (EINSCHNITT 5,0 %) UNTERZOGEN, NACH SPEC.ISO 10893-10 U2/C, MIT ZUFFRIEDENSTELLENDEM ERGEBNIS GEPRUEFT

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Francesco Servalli - Inspector
Milan Office

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Number / Nummer: **01-19-15224**
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Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

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SUPPLEMENTARY INFORMATION / ZUSAETZLICHE INFORMATIONEN

Supplementary Information Zusaetzliche Informationen	
Compliance to chemical, mechanical propert., Non-Destructive of NORSOK M-120 (ed.5, November 2008), MDS-Y47 grade S460G6 +QT (without requirements Qualification/Surface Protect.) SEAMLESS HOT FINISHED PIPES VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. MANUFACTURED BY TENARIS DALMINE NO WELD REPAIR, MERCURY AND RADIATION FREE AS PER STANDARD, PIPES CAN BE REPAIRED; MANUFACTURER SHOULD DECIDE TO GRIND THE ARE DETECTED. THE RESULTED SURFACE AREAS, AFTER GRINDING, HAS DIFFERENT COLORATION COMPARED WITH USUAL ONE AS MANUFACTURED. THE RESIDUAL WALL THICKNESS AFTER GRINDING HAS BEEN CHECKED RESULTING IN TOLERANCE WITH STANDARD. Tenaris IT identification number for MTC: 58K/ vH	Compliance to chemical, mechanical propert., Non-Destructive of NORSOK M-120 (ed.5, November 2008), MDS-Y47 grade S460G6 +QT (without requirements Qualification/Surface Protect.) NAHTLOSE WARMGEFERTIGTE STAHLROHRE BESICHTIGUNG UND MASSKONTROLLE WURDE OHNE BEANSTANDUNGEN DURCHGEFUEHRT BERUHIGTER STAHL, AUS FEINKORN; IM ELEKTROOFEN GEFERTIGT DAS GELIEFERTE MATERIAL ENTSPRICHT BESTELLVORSCHRIFTEN. Manufactured by Tenaris Dalmine KEINE SCHWEISSREPARATUREN, QUECKSILBER- UND STRAHLUNGSFREI DIE ROHRLEITUNGEN KÖNNEN STANDARDMÄßIG REPARIERT WERDEN; DER HERSTELLER SOLL BEI DER ENDGÜLTIGEN SICHTPRÜFUNG EINIGE UNEBENHEITEN FESTGESTELLT WERDEN. DIE SICH DARAUS ERGEBENDEN OBERFLÄCHEN WEISEN NACH DEM SCHLEIFEN EINE UNTERSCHIEDLICHE FÄRBUNG IM VERGLEICH ZU JENER DES HERGESTELLTEN PRODUKTS AUF. DIE RESTWANDSTÄRKE NACH DEM SCHLEIFEN WURDE AUF TOLERANZ IM VERGLEICH ZUM STANDARDWERT GEPRÜFT. Tenaris IT-Identifikationsnummer fur MTC: 58K/DvH

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MARKING / MARKIERUNG

Marking Markierung	
STENCILING _T ISO 3183 API Spec 5L 0038.1 _API _DATA 168,3 14,27 L450Q/X65Q PS L 2 SMLSEN10225 S460G6+QT HEAT: _COLATA MT _MT NR. _NR R80-551106568 5 -	LACKIERUNG _T ISO 3183 API Spec 5L 0038.1 _API _DATA 168,3 14,27 L450Q/X65Q PS L 2 SMLSEN10225 S460G6+QT HEAT: _COLATA MT _MT NR. _NR R80-551106568 5 -

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Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

+ 39 035 560 111 tel
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INSPECTION CERTIFICATE
ABNAHMEPRUEFZEUGNIS
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Nummer:	Page / Seite:
01-19-15224	8 / 9

Date / Datum: **December 13, 2019**

Customer / Kunde:	Customer's Order Item / Kunden Bestell-Nr.:	Customer's Reference / Kunden Referenz-Nr.:	Manufacturer's Works Order N° / Auftrags-Nr.:
	R80-5511065685	-	1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

MARKING / MARKIERUNG

Marking
Markierung

LEGEND
_T = TENARIS Logo
_API = API Logo
_OATA = Marking Date
_COLATA = Heat Number
_MT = Pipe/Tube Length in meters
_NR = Pipe/Tube identifier

HINWEISTEXT
_T = Logo TENARIS
_API = Logo API
_DATA = Tag-Kennzeichnung
_COLATA = Schmelze
_MT = Rohrlänge in Metern
_NR = ID der Röhre

PUNCHING
_T ISO 3183 API Spec 5L 0038.1 _API _DATA 168,3 14,27 L450Q/X65Q PS
L 2 SMLS EN 10225 S460G6+QT _COLATA LR

LEGEND
_T = TENARIS Logo
_API = API Logo
_DATA = Punching Date
_COLATA = Heat Number

VORGESCHRIEBENEN
_T ISO 3183 API Spec 5L 0038.1 _API _DATA 168,3 14,27 L450Q/X65Q PS
L 2 SMLS EN 10225 S460G6+QT _COLATA LR

HINWEISTEXT
_T = Logo TENARIS
_API = Logo API
_DATA = Stanz-Tag
_COLATA = Schmelze

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed ~~Identified~~ Reviewed
Francesco Servalli - Inspector
Milan Office

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Number / Nummer:	Page / Seite:
01-19-15224	9 / 9

Date / Datum: **December 13, 2019**

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	R80-5511065685	.	1280215/001

Manufacturing Process / Herstellungsprozess:	Product Type / Art des Produkts:	Surface / Oberflaeche:
QUENCHED & TEMPERED VERGUETET	SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) NAHTLOSE STAHLROHRE LINE PIPES (MIT ZUSATZLICHEN ANFORDERUNGEN)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH INNEN ROH, AUSSEN GEOELT

Standard or Specification / Norm oder Spezifikation:	Steel Grade / Werkstoff:	Ends / Enden:
See note nr.1 Sehen Sie Anmerkung nr.1	See note nr.2 Sehen Sie Anmerkung nr.2	BEVEL API 5L / ISO 3183 CT4:8825 MIT FASE GEM. API 5L / ISO 3183 CT4:8825

Dimensions / Abmessung:	Schedule / Schedule :	Length / Laenge :	Quantity / Menge: 21Pcs/Pz	Nominal Weight / Theor. Gewicht:
ø 6.626" O.D. x .562" W.T.	.	32.808 ft ÷ 39.370 ft	772'04" ft 28245,5 lb	36.42 lb/ft
ø 168.30mm O.D. x 14.27mm W.T.	.	10000 mm ÷ 12000 mm	235.41 mt 12812 kg	54.20 Kg/m

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance w purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Hiermit wird bestaetigt, dass das im Attest beschriebene Material gemaess der Anforderungen der Bestellung hergestellt, geprueft und abgenommen wurde. Dieses Attest ist keine Ursprungserklaerung und kann nicht als solche verwendet werden.

CUSTOMER THIRD PARTY

INSPECTION COMPANY
ABNAHMEGESELLSCHAFT

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed ☐ Verified ☐ Reviewed
Francesco Servalli - Inspector
Milan Office

TENARIS QUALITY DEPARTMENT SIGNATURE

QUALITY CERTIFICATION DEPT.
QUALITAETS- UND ZEUGNISABTEILUNG
LATTANZI Sabrina

CHIEF OF QUALITY CERTIFICATION DEPT.
LEITER DER QUALITAETS- UND ZEUGNISABTEILUNG
FERRARI Donigio

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TenarisDalmine

Tipo di documento Document type	Evento Event ID	Anno Year
Concession Request	4688 /	2019
	Revision	
	0	

Emesso da: Issued by:	Lucia GRIGIS
Corrispondente: Order Manager:	Dana SZABO
Problema: Problem:	Short pipes & Overproduction

Cliente: Customer:	
Ordine Cliente: Customer Order:	RB0-5511065685
Progetto: Project:	0

Conferma Dalmine: Dalmine Production Order:	1280215	Posizione: Item:	1
Ordine di Vendita Dalmine: Dalmine Sales Order:	ZCSO-31251264-10		

Diametro [mm]: Outside Diameter	168.3	Spessore [mm]: Wall Tickness [mm]:	14,27	Grado Acciaio: Steel Grade:	X65
Norma: Standard:	API 5L PSL2 46A EDIZ., ISO 3183 2012 PSL2, EN 10225, NACE MR 0175, MR0103 + TQ 20038865 V2.2				

Descrizione:
Description:

Min length (mm)	10000
Max length (mm)	12000
Required Quantity (pcs)	
Required Quantity (m)	203
Required Quantity (kg)	11333
Tolerance UM	%
Tolerance +	10
Tolerance -	10

Heat	Packing List	kg	mm	issue
995154	13	536	9920	Short pipes
995154	20	603	11140	Over production
Totals		1139,00	21060	

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Witnessed Reviewed Approved
Francesco Servalli - Inspector
Milan Office

Approvato da: Approved by:	Quality Department		
Data: Date:	06-Nov-19	Firma: Signature:	Alberto De Giuli

TO BE COMPLETED BY CUSTOMER

ACCETTATO ACCEPTED		RIFIUTATO REJECTED	

Commenti:
Comments:

Approvato da: Approved by:	Data/Firma: Date/Signature:

Loading order
Number
Enclouse

Dimensional and visual inspection certificate

Plant : Dalmine

Customer's order : R80-5511065685

Mill order : 1280215/001
EXP Reference : C/67/896
Part Number :

Product : SEAMLESS LINE PIPES (WITH EXTRA REQUIREMENTS) ACC. TO THE NORM API 5L PSL2 46TH ED., ISO 3183 2012 PSL2, EN 10225, NACE MR 0175, MR0103 + TQ 20038865 V2.2 STEEL GR. X65 Q PSL2/L450Q PSL2, S460G6+QT EN 10225 QUENCHED & TEMPERED BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH BEVEL API 5L / ISO

Dimensions :

From mm	From Ft	To mm	To Ft	Diam. mm	Diam Inch	W. T. mm	W.T. Inch
10000	33	12000	39	168,30	6.625	14,27	.561

	Pieces	Mt	Kg	Feet	Lbs
Ordered quantity :		203,00	11333	666'00	24985
Previous inspected Quantity :					
Total inspected :					

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
1	OK	1	11,80	643,00	38'09"	1417,57	995154	5	77,00				1915224		264193040699
2	OK	1	11,26	612,00	36'11"	1349,23	995154	5	80,00				1915224		064193040700
3	OK	1	11,30	614,00	37'01"	1353,64	995154	5	82,00				1915224		664193040701
4	OK	1	11,20	607,00	36'09"	1338,20	995154	5	75,00				1915224		864193040702
5	OK	1	11,29	614,00	37'00	1353,64	995154	5	85,00				1915224		764193040703
6	OK	1	11,28	614,00	37'00	1353,64	995154	5	88,00				1915224		464193040704
7	OK	1	11,33	616,00	37'02"	1358,05	995154	5	89,00				1915224		964193040705
8	OK	1	11,40	618,00	37'05"	1362,46	995154	5	90,00				1915224		364193040706
9	OK	1	11,60	631,00	38'01"	1391,12	995154	5	87,00	Z6382/C			1915224		164193040707
10	OK	1	11,11	604,00	36'05"	1331,59	995154	5	78,00				1915224		564193040708
11	OK	1	11,27	615,00	37'00	1355,84	995154	5	93,00				1915224		264193040709
12	OK	1	11,25	613,00	36'11"	1351,43	995154	5	79,00				1915224		264193040710
13	OK	1	9,92 **	536,00	32'07"	1181,68	995154	5	83,00				1915224		864193040711
14	OK	1	11,73	638,00	38'06"	1406,55	995154	5	84,00				1915224		564193040712
15	OK	1	10,58	578,00	34'09"	1274,27	995154	5	92,00				1915224		964193040713
16	OK	1	10,69	584,00	35'01"	1287,50	995154	5	81,00				1915224		164193040714
17	OK	1	11,07	605,00	36'04"	1333,80	995154	5	95,00				1915224		664193040715
18	OK	1	11,22	612,00	36'10"	1349,23	995154	5	91,00				1915224		064193040716
19	OK	1	11,20	615,00	36'09"	1355,84	995154	5	94,00				1915224		364193040717
20	OK	1	11,14	603,00	36'07"	1329,39	995154	5	86,00	Z6381/00			1915224		764193040718
21	OK	1	11,77	640,00	38'07"	1410,96	995154	5	76,00				1915224		464193040719
		21	235,41	12812,00	772'04"	28245,63	Total heat-lot		005						
		21	235,41	12812,00	772'04"	28245,63	Tot heat		995154						

21 235,41 12812,00 772'04" 28245,63 Total amount of pieces passed by inspection

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Witnessed
Francesco Servalli - Inspector
Milan Office

Technical marking : MARKING TO NORM+ADDITIONAL REQUIR.

Date
12.12.2019

TenarisDalmine

Ispection Dpt.
DONIGIO FERRARI

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01/18/09251	1 / 9
Date / Data: July 18, 2018	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - Item	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	435415-5	11405500	1262005/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 46Pcs/Pz		Nominal Weight / Peso nominale:
ø 10.748" O.D. x .250" W.T. ø 273.00mm O.D. x 6.35mm W.T.		26.247 ft ÷ 38.714 ft 8000 mm ÷ 11800 mm	1674'11" ft 510.52 mt	48406,8 lb 21957 kg	28,06 lb/ft 41.76 Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031212440 / 000060 Shipping note: Address:	Town: Country:

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta Ls	Sc	Type Tipo	Ori	Specimen dimensions Dimens ori della provetta Size Dimensioni mm	Area mm2	Test temp Temp. di prova °C	Y.S. EUL 0.5% Min: 355.00 Max: 999.00 N/MM2	U.T.S. Req. Min: 460.00 Max: 620.00 N/MM2	Y.S./U.T.S Req. Max. 0.88	Elongation / Allungamento Lo 5D = 5,65√So cal.	Min. mm	Min. %	Obt. %
983684	Z0533	3	B	N	Ss	L	19.83 x 6.87	136,40	+20	411.00	548,00	0,75	5D	65,0	22,0%	30,0%

ITEM 2760

B: Body / Corpo	Max: Maximum / Massimo	Ori. Orientation / Orientamento	Ss: Strip specimen / Rettangolare
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req. Max: Required maximum / Massimo richiesto	U.T.S. Ultimate Tensile Strength / Rottura
Lo: Initial length / Lunghezza iniziale	N. Normalized / Normalizzato	Req. Required / Richiesto	Y.S. Yield Strength / Snervamento
Ls: Location of sample / Ubicazione provetta	Obt: Obtained / Ottenuto	Sc. Specimen condition / Condizioni Provetta	

PRJ 11080118

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Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed
Francesco Servalli - Inspector
Milan Office

Tenaris

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Number / Numero:	Page / Pagina:
01/18/09251	2 / 9
Date / Data: July 18, 2018	

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	435415-5	11405500	1252005/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISI GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

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TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta				Specimen dimensions Dimensioni della provetta		Test temp Temp. di prova	Y.S. EUL 0.5% Min: 360.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.93	Elongation / Allungamento			
			Ls	Sc	Type Tipo	Ori	Size Dimensioni	Area Area					Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
983684	Z0533	3	B	N	Ss	L	37.88 x 6.50	247.10	+20	421.00	569.00	0.74	2"	50.8	22.0%	32.5%

B: Body / Corpo	Max: Maximum / Massimo	Ori: Orientation / Orientamento	Ss: Strip specimen / Rettangolare
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req. Max: Required maximum / Massimo richiesto	U.T.S: Ultimate Tensile Strength / Rottura
Lo: Initial length / Lunghezza iniziale	N: Normalized / Normalizzato	Req: Required / Richiesto	Y.S. Yield Strength / Snervamento
Ls: Location of sample / Ubicazione provetta	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta	

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°		Composition % / Composizione %																											
				X 100													X 1000									X 10000					
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	F4	F5	P	S	Sn	Al	Ti	Nb	V	As	N	B	Ca	Sb	Pb
			H Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
			Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
			P Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
			Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
983684			H	15	118	27	12	11	5	14	41	24	8.3	8.1	42	305.8	0	11	2	11	26	2	21	60	6	85	3	16	28	14
983684	Z0533	3	P	16	114	25	11	12	4	14	41	25	8.1	7.9	41	277.1	0	11	2	9	23	2	19	60	5	83	3	20	23	7

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Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Witnessed Reviewed
Francesco Servalli Inspector
Milan Office

Tenaris

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero: **01/18/09251** | Page / Pagina: **3 / 9**

Date / Data: **July 18, 2018**

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	435415-5	11405500	1252005/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISI GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 46Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .250" W.T. ø 273.00mm O.D. x 6.35mm W.T.	. .	26.247 ft ÷ 38.714 ft 8000 mm ÷ 11800 mm	1674'11" ft 48406,8 lb 510.52 mt 21957 kg	28.06 lb/ft 41.76 Kg/m

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

				Composition % / Composizione %																										
				X 100												X 1000								X 10000						
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	F4	F5	P	S	Sn	Al	Ti	Nb	V	As	N	B	Ca	Sb	Pb
			H Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
			Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	P Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
			Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
983684	Z0534/C	3	P	16	113	25	11	11	4	13	41	25	8	7.8	39	291.1	0	10	2	8	23	2	18	60	5	79	2	16	20	6

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V +Ti)
F2: (Nb+V)
F3: (Cu+Ni+Cr+Mo)
F4: (Al/N)
F5: (Bi)
H: Heat / Colata
Max: Maximum / Massimo
Min: Minimum / Minimo
P: Product / Prodotto
PCM: C+V/10+Mo/15+(Mn+Cu+Cr)/20+Si/30+Ni/60+5B

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

Required values / Valori richiesti	Individuals / Individuali	Average / Media	Hardness type / Tipo de dureza: vickers	Formula applied / Formula Applicata
	Min: -- Max: 248.0 Var: --	Min: -- Max: -- Var: --	Minimum martensite / martensite minima: (%): --	

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition		Quad.	Scale	OD						MW						ID					
			Ls	Sc		Scala	1	2	3	4	Dist. (mm)	Avg.	1	2	3	4	Avg.	1	2	3	4	Dist. (mm)	Avg.
983684	Z0533	3	B	N	1	HV10	157.0	159.0	158.0	158.0	- 1.50	158.0	164.0	165.0	165.0	164.0	164.5	173.0	172.0	172.0	171.0	1.5	172.0

Avg: Average / Media
B: Body / Corpo
ID: Internal Diameter / Diametro interno
Ls: Location of sample / Ubicazione provetta
MW: Middle Wall / Centro da espessura
N: Normalized / Normalizzato
Sc: Specimen condition / Condizioni Provetta
Var: Variation / Variazione

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Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Reviewed
Francesco Servalli Inspector
Milan Office

Tenaris

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Piazza Caduti 6 luglio 1944, 1
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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

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Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8625 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8625

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THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

Dist: Distance from outer diameter / Distanza dal diametro esterno
Max: Maximum / Massimo
Min: Minimum / Minimo
OD: Outside Diameter / Diametro esterno
Quad: Quadrant / Quadrante

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV — Orientation/Direzione: T — Unit / Unità: JOULE — Shear area / Area duttile %
Position/Posizione: — Temp: - 60 — Unit/Unità: °C — Ind.Min.Req: 19 — Req.Min.Avg: 25 — Ind.Min.Req: -- — Req.Min.Avg: --

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Lot N° / Lotto N°	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.	Results / Risultato 1	2	3	Avg.
983684	Z0533	outside	3	B	N	10 x 5.00	46.0	41.0	49.0	45.0	45	40	45	43

Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
N: Normalized / Normalizzato
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T: Transversal / Trasversale
Temp: Temperature / Temperatura

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HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	14.3	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

STANDARD EDITIONS
EDIZIONI NORME

Standard:API 5L Year:2012 Revision:45^ Revision year:.... Standard:ISO 3183 Year:2012 Standard:NACE MR0175/ISO 15156 Year:2015	Norma:API 5L Anno:2012 Revisione:45^ Anno della revisione:.... Norma:ISO 3183 Anno:2012 Norma:NACE MR0175/ISO 15156 Anno:2015

PRODUCT DESCRIPTION NOTES
NOTE DI DESCRIZIONE DEL PRODOTTO

Note 1 is the full description of the 'Standard or specification' ACC.TO THE NORM API 5L PSL2 45TH ED. ,ISO 3183 PSL2 ED. 2012, NACE MR0175/ISO 15156 & TQC 20036287/3.1	La nota 1 è la descrizione completa delle 'Norme o specifiche' NORMA API 5L PSL2 45A EDIZ. ,ISO 3183 PSL2 ED. 2012, NACE MR0175/ISO 15156 & TQC 20036287/3.1

Supplementary information
Informazioni supplementari

AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 30 GAUSS HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156	DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESENTA UN MAGNETISMO RESIDUO SUPERIORE A 30 GAUSS DUREZZA HRC 22 MAX, IN ACCORDO ALLA SPEC. NACE MR0175/ISO 15156

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SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information	Informazioni supplementari
ALL PIPES HAVE BEEN TESTED BY ELECTROMAGNETIC TEST LONG/INT-EXT.	I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO ELETTROMAGNETICO
WITH SATISFACTORY RESULT	LONG/INT-EXT CON ESITO SODDISFACENTE
ALL PIPES HAVE BEEN NORMALIZED AT 920 °C FOR 10 MINS. AND COOLED IN	I TUBI SONO STATI NORMALIZZATI A 920 °C PER 10 MIN. E RAFFREDDATI IN
STILL AIR	ARIA CALMA
THE WALL THICKNESS, CONTROLLED BY U.T., OF EACH PIPE IS WITHIN THE	LO SPESSORE DEI TUBI, CONTROLLATO CON ULTRASUONI, E' CONFORME ALLE
REQUESTED TOLERANCE	TOLLERANZE RICHIESTE
ALL PIPES HAVE BEEN TESTED FOR LAMINATION DETECTION BY U.T.,	I TUBI SONO STATI CONTROLLATI PER LA RICERCA DI DOPPI SPESSORI CON
WITH SATISFACTORY RESULT EN ISO 10893-8 LEVEL U3/EN 10246-14 U3	ULTRASUONI, CON ESITO POSITIVO EN ISO 10893-8 LEVEL U3/EN 10246-14 U3
THE ENDS (FOR 300 mm) HAVE BEEN TESTED WITH WET	LE ESTREMITA' DEI TUBI SONO STATE CONTROLLATE (PER 300 mm) CON
FLUORESCENT MAGNETIC PARTICLES, WITH SATISFACTORY RESULT	PARTICELLE MAGNETICHE FLUORESCENTI UMIDE, CON ESITO SODDISFACENTE
ALL PIPES HAVE BEEN TESTED BY ULTRASONIC INSPECTION FOR	TUTTI I TUBI SONO STATI CONTROLLATI CON U.S. PER LA RICERCA DI DIFETTI
LONGITUDINAL INSIDE/OUTSIDE	LONGITUDINALI INTERNI/ESTERNI
DEFECTS (NOTCH 5,0 %) ACCORDING TO SPEC.	(TARATURA 5,0 %) IN ACCORDO ALLA SPEC.
ASTM E213 /EN 10246-7 U2C /ISO 10893-10 U2C	ASTM E213 /EN 10246-7 U2C /ISO 10893-10 U2C,
WITH SATISFACTORY RESULT	CON ESITO SODDISFACENTE
UT full length	UT full length
Compliance with chemical composition and mechanical properties	Compliance with chemical composition and mechanical properties
of NORSOK M-120 MDS-Y27 Rev. 4/Y22 Rev. 5/EN10225:2009	of NORSOK M-120 MDS-Y27 Rev. 4/Y22 Rev. 5/EN10225:2009
gr. S355G14+N/G15+N or S355G14+Q/G15+Q(without CTOD testing)	gr. S355G14+N/G15+N or S355G14+Q/G15+Q(without CTOD testing)
We confirm compliance with chemical composition and mechanic	We confirm compliance with chemical composition and mechanic
al properties of NORSOK M-630 MDS-C22 Rev. 5 grade L360N or	al properties of NORSOK M-630 MDS-C22 Rev. 5 grade L360N or
L360Q	L360Q
STEEL MADE BY ELECTRIC FURNACE,SPECIALLY DESULPHURIZED, FULLY KILLED	STEEL MADE BY ELECTRIC FURNACE,SPECIALLY DESULPHURIZED, FULLY KILLED

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SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
AND MADE TO FINE GRAIN PRACTICE"	AND MADE TO FINE GRAIN PRACTICE"
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE.
MANUFACTURED BY TENARIS DALMINE	FABBRICATO DA TENARIS DALMINE
NO WELD REPAIR, MERCURY AND RADIATION FREE	NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI
Tenaris IT identification number for MTC: 57,1'-WR	Numero Identificativo Tenaris IT per MTC: 57,1'-WR

MARKING / MARCATURA

Marking Marcatura	
STENCILING _T ISO 3183 API Spec 5L 0038,1 _API _DATA 273 6,35 L360N/X52N PSL 2 SMLS HEAT _COLATA MT _MT KG _KG NR. _NR PO: 435415-5 -	VERNICIATURA _T ISO 3183 API Spec 5L 0038,1 _API _DATA 273 6,35 L360N/X52N PSL 2 SMLS HEAT: _COLATA MT _MT KG _KG NR. _NR PO: 435415-5 -
LEGEND _T = TENARIS Logo _API = API Logo _DATA = Marking Date _COLATA = Heat Number _MT = Pipe/Tube Length in meters	LEGENDA _T = Logo TENARIS _API = Logo API _DATA = Data di marcatura _COLATA = Numero di colata _MT = Lunghezza del tubo in metri

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VIS/DIM/MARK

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MARKING / MARCATURA

Marking Marcatura	
_KG = Pipe/Tube Weight in kilograms _NR = Pipe/Tube identifier	_KG = Peso del tubo in chilogrammi _NR = Identificativo numerico del tubo
PUNCHING _T ISO 3183 API Spec 5L 0038.1 _API _DATA L360N/X52N PSL 2 _COLATA NR. _NR	PUNZONATURA _T ISO 3183 API Spec 5L 0038.1 _API _DATA L360N/X52N PSL 2 _COLATA NR. _NR
LEGEND _T = TENARIS Logo _API = API Logo _DATA = Punching Date _COLATA = Heat Number _NR = Pipe/Tube identifier	LEGENDA _T = Logo TENARIS _API = Logo API _DATA = Data di punzonatura _COLATA = Numero di colata _NR = Identificativo numerico del tubo

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Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Monitored Reviewed
Francesco Servalli - Inspector
Milan Office

Lloyd's Register

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01/18/09251	9 / 9
Date / Data: July 18, 2018	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - Item	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	435415-5	11405500	1252005/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) TUBI STRUTTURALI S.S. PER COSTRUZIONI OFFSHORE (CON RICHIESTE SUPPLEMENTARI)	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.1 Vedi nota nr.1	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 46Pcs/Pz		Nominal Weight / Peso nominale:
ø 10.748" O.D. x .250" W.T. ø 273.00mm O.D. x 6.35mm W.T.	.	26.247 ft ÷ 38.714 ft 8000 mm ÷ 11800 mm	1674'11" ft 510.52 mt	48406,8 lb 21957 kg	28.06 lb/ft 41.76 Kg/m

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Si certifica che il prodotto descritto è stato prodotto, provato, testato e controllato in conformità ai requisiti dell'ordine del cliente. Questo certificato non è una dichiarazione d'origine e non può essere usato come tale.

	CUSTOMER THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' LATTANZI Sabrina	CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' FERRARI Donigio

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed
Francesco Servalli - Inspector
Milan Office

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Loading order
Number
Enclouse _____

Dimensional and visual inspection certificate

Plant : Dalmine Page 1

Customer's order : 435415-5

Mill order : 1252005/001
EXP Reference : C/44/730
Part Number : 11405500 **********

Product : SS HOT FINISHED PIPES FOR OFFSHORE STRUCTURES (WITH SUPPLEMENTARY REQUESTS) ACC.TO THE NORM API 5L PSL2 45TH ED. ,ISO 3183 PSL2 ED. 2012, NACE MR0175/ISO 15156 & TQC 20036287/3.1 STEEL GR. L360 N/X52 N PSL2 NORMALIZED BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH BEVEL API 5L / ISO

Dimensions :	From mm	From Ft	To mm	To Ft	Diam. mm	Diam Inch	W. T. mm	W.T. Inch
	8000	26	11800	39	273,00	10.748	6,35	.250

	Pieces	Mt	Kg	Feet	Lbs
Ordered quantity :		500,00	21503	1640'05"	47406
Previous inspected Quantity :	_____	_____	_____	_____	_____
Total inspected :	_____	_____	_____	_____	_____

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
1	CF	1	10,41	444,00	34'02"	978,85	983684	3							364181840045
2	CF	1	10,80	456,00	35'05"	1005,31	983684	3							964181840046
3	CF	1	10,75	456,00	35'03"	1005,31	983684	3							664181840047
4	CF	1	10,31	440,00	33'10"	970,03	983684	3							264181840048
5	CF	1	10,87	460,00	35'08"	1014,13	983684	3							564181840049
6	CF	1	11,70	509,00	38'05"	1122,15	983684	3							964181840050
7	CF	1	11,45	489,00	37'07"	1078,06	983684	3							364181840051
8	CF	1	11,52	507,00	37'10"	1117,74	983684	3							164181840052
9	CF	1	11,15	488,00	36'07"	1075,85	983684	3							264181840053
10	CF	1	10,61	449,00	34'10"	989,87	983684	3							564181840054
11	CF	1	10,71	454,00	35'02"	1000,90	983684	3							064181840055
12	CF	1	11,71	514,00	38'05"	1133,17	983684	3							664181840056
13	CF	1	11,68	509,00	38'04"	1122,15	983684	3							864181840057
14	CF	1	10,80	473,00	35'05"	1042,79	983684	3							464181840058
15	CF	1	11,06	468,00	36'03"	1031,76	983684	3							764181840059
16	CF	1	10,84	459,00	35'07"	1011,92	983684	3							664181840060
17	CF	1	10,95	474,00	35'11"	1044,99	983684	3							064181840061
18	CF	1	9,47	400,00	31'01"	881,85	983684	3							364181840062
19	CF	1	11,11	469,00	36'05"	1033,97	983684	3							464181840063
20	CF	1	10,89	473,00	35'09"	1042,79	983684	3							764181840064
21	CF	1	11,58	490,00	38'00	1080,26	983684	3							264181840065
22	CF	1	10,92	463,00	35'10"	1020,74	983684	3							864181840066
23	CF	1	10,67	467,00	35'00	1029,56	983684	3							564181840067
24	CF	1	11,28	477,00	37'00	1051,60	983684	3							164181840068
25	CF	1	11,10	469,00	36'05"	1033,97	983684	3							964181840069
26	CF	1	11,00	477,00	36'01"	1051,60	983684	3							264181840070
27	CF	1	11,15	473,00	36'07"	1042,79	983684	3							864181840071
28	CF	1	11,72	511,00	38'05"	1126,56	983684	3							564181840072
29	CF	1	11,41	497,00	37'05"	1095,70	983684	3							964181840073
30	CF	1	11,42	502,00	37'06"	1106,72	983684	3							164181840074
31	CF	1	11,71	511,00	38'05"	1126,56	983684	3							664181840075
32	CF	1	11,21	474,00	36'09"	1044,99	983684	3							064181840076
33	CF	1	11,46	501,00	37'07"	1104,51	983684	3							364181840077
34	CF	1	8,05	354,00	26'05"	780,44	983684	3							764181840078
35	CF	1	11,71	496,00	38'05"	1093,49	983684	3							464181840079
36	CF	1	11,70	509,00	38'05"	1122,15	983684	3							464181840080

Follow

PRJ 11080118

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Milan Office

Technical marking : MARKING AS INDIC, IN TECHN. SPEC.

Loading order
Number
Enclouse

Dimensional and visual inspection certificate

Plant : Dalmine

Customer's order : 435415-5

Mill order : 1252005/001
EXP Reference : C/44/730
Part Number : 11405500

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
37	CF	1	11,71	509,00	38'05"	1122,15	983684	3							564181840081
38	CF	1	11,57	490,00	38'00	1080,26	983684	3							764181840082
39	CF	1	11,48	498,00	37'08"	1097,90	983684	3							664181840083
40	CF	1	10,72	468,00	35'02"	1031,76	983684	3							364181840084
41	CF	1	11,36	482,00	37'03"	1062,63	983684	3							864181840085
42	CF	1	11,45	495,00	37'07"	1091,29	983684	3							264181840086
43	CF	1	11,26	479,00	36'11"	1056,01	983684	3							064181840087
44	CF	1	11,37	480,00	37'04"	1058,22	983684	3							964181840088
45	CF	1	11,41	499,00	37'05"	1100,11	983684	3							164181840089
46	CF	1	11,31	495,00	37'01"	1091,29	983684	3							164181840090
		46	510,52	21957,00	1674'11"	48406,85	Total heat-lot		003						
		46	510,52	21957,00	1674'11"	48406,85	Tot heat		983684						
		46	510,52	21957,00	1674'11"	48406,85	Total amount of pieces passed by inspection								

PR 11080118

Technical marking : MARKING AS INDIC. IN TECHN. SPEC.

Date
18.07.2018

TenarisDalmine

Ispection Dpt.
DONIGIO FERRARI

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Lloyd's Register
Witnessed Monitored Reviewed
Francesco Servalli - Inspector
Milan Office

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02623	1 / 10
Date / Data: March 05, 2019	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz		Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 36.714 ft	3366'06" ft	182588,8 lb	54.78 lb/ft
ø 273.00mm O.D. x 12.70mm W.T.	.	8000 mm ÷ 11800 mm	1026.12 mt	82821 kg	81.52 Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031228804 / 000010 Shipping note: Address:	Town: Country:

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Lot N° Lotto N°	Specimen condition Condizioni della provetta				Specimen dimensions Dimensioni della provetta		Test temp Temp. di prova	Y.S. EUL 0.5% Min: 350.00 Max: 530.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.93	Elongation / Allungamento			
			Ls	Sc	Type Tipo	Ori	Size Dimensioni	Area Area	Temp.				Lo	Min.	Min.	Obt.
							mm	mm2	°C	MPa	MPa		cal.	mm	%	%
986803	F0703/C	6	B	N	Ss	L	37.80 x 12.63	479.10	+20	388.00	541.00	0.72	2"	50.8	22.0%	39.5%
987245	F0691/C	5	B	N	Ss	L	38.50 x 12.60	486.90	+20	392.00	539.00	0.73	2"	50.8	22.0%	40.0%
987245	F0699	6	B	N	Ss	L	37.76 x 12.62	478.20	+20	388.00	536.00	0.72	2"	50.8	22.0%	40.5%
987245	F0699/R0	6	B	N	Ss	L	37.76 x 12.62	478.20	+20	388.00	536.00	0.72	2"	50.8	22.0%	40.5%
990497	F0689	4	B	N	Ss	L	38.50 x 12.67	489.60	+20	392.00	536.00	0.73	2"	50.8	22.0%	40.5%
990497	F0689/R0	4	B	N	Ss	L	38.50 x 12.67	489.60	+20	392.00	536.00	0.73	2"	50.8	22.0%	40.5%

ITEM 1970

PRJ 1109990655

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Witnessed
Francesco Bertelli
Milan Office

B: Body / Corpo	Max: Maximum / Massimo	Ori: Orientation / Orientamento	Ss: Strip specimen / Rettangolare
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req. Max: Required maximum / Massimo richiesto	U.T.S: Ultimate Tensile Strength / Rottura
Lo: Initial length / Lunghezza iniziale	N: Normalized / Normalizzato	Req: Required / Richiesto	Y.S: Yield Strength / Snervamento
Ls: Location of sample / Ubicazione provetta	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta	

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Tenaris

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Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02623	**2 / 10**
Date / Data: **March 05, 2019**	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISI GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 38.714 ft	3366'06" ft 182588,8 lb	54.78 lb/ft
ø 273.00mm O.D. x 12.70mm W.T	.	8000 mm ÷ 11800 mm	1026.12 mt 82821 kg	81.52 Kg/m

TENSILE TEST / PROVA DI TRAZIONE

Heat N° / Colata N°	Sample N° / Prova N°	Lot N° / Lotto N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. EUL 0.5% Min: 355.00 Max: 999.00	U.T.S. Req. Min: 460.00 Max: 620.00	Y.S./U.T.S Req. Max. 0.88	Elongation / Allungamento			
			Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area / Area					Lo 5D = 5.65√So	Min.	Min.	Obt.
							mm	mm2	°C	N/MM2	N/MM2		cal.	mm	%	%
986803	F0703/C	6	B	N	Cs	L	9.99	78.40	+20	381.00	540.00	0.71	5D	50.0	22.0%	22.0%
987245	F0691/C	5	B	N	Cs	L	9.99	78.40	+20	390.00	547.00	0.71	5D	50.0	22.0%	28.5%
987245	F0699	6	B	N	Cs	L	10.04	79.20	+20	390.00	539.00	0.72	5D	50.0	22.0%	29.5%
990497	F0689	4	B	N	Cs	L	10.05	79.30	+20	393.00	544.00	0.72	5D	50.0	22.0%	28.0%

B: Body / Corpo
Cs: Cylindrical specimen / Cilindrica
L: Longitudinal / Longitudinale
Lo: Initial length / Lunghezza iniziale
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
N: Normalized / Normalizzato
Obt: Obtained / Ottenuto
Ori: Orientation / Orientamento
Req. Max: Required maximum / Massimo richiesto
Req: Required / Richiesto
Sc: Specimen condition / Condizioni Provetta
U.T.S: Ultimate Tensile Strength / Rottura
Y.S: Yield Strength / Snervamento

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Witnessed ~~Monitored~~ ~~Reviewed~~
Francesco Servalli - Inspector
Milan Office

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Tenaris

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Date / Data: **March 05, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 38.714 ft	3366'06" ft 182588,8 lb	54.78 lb/ft
ø 273.00mm O.D. x 12.70mm W.T.	.	8000 mm ÷ 11800 mm	1026.12 mt 82821 kg	81.52 Kg/m

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

Composition % / Composizione %

				X 100													X 1000								X 10000				
				C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	PCM	F1	F2	F3	F4	F5	P	S	Sn	Al	Ti	Nb	V	As	N	B	Ca	Sb	Pb
			H Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
			Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
Heat N°	Sample N°	Lot N°	P Max	16	160	45	30	25	8	30	43	25	10	10	80	--	1	25	7	20	60	20	40	80	20	110	5	50	100	100
Colata N°	Prova N°	Lotto N°	Min	--	--	15	--	--	--	--	--	--	--	--	--	220	--	--	--	--	20	--	--	--	--	--	--	--	--	--
986803			H	13	118	31	11	12	4	15	39	22	8.3	8.1	42	368.42	0.1	16	2	13	28	2	21	60	6	76	2	22	21	2
986803	F0703/C	6	P	13	121	30	13	14	6	15	40	23	8.3	8.1	48	454.55	0	14	2	12	30	2	21	60	6	66	2	24	23	3
986803	F0704	6	P	14	120	30	13	14	6	15	41	24	8.3	8.1	48	344.83	0	14	2	11	30	2	21	60	6	87	2	18	22	2
987245			H	13	121	30	13	14	6	15	40	23	8.4	8.2	48	389.61	0	14	2	12	30	2	22	60	6	77	2	27	23	2
987245	F0691/C	5	P	13	120	30	13	14	6	15	40	23	8.3	8.1	48	405.41	0	13	2	11	30	2	21	60	6	74	2	22	22	5
987245	F0692	5	P	13	120	29	13	14	6	15	40	23	8.3	8.1	48	386.67	0	14	2	12	29	2	21	60	6	75	2	18	21	3
987245	F0699	6	P	13	121	29	13	14	6	15	40	23	8.2	8	48	447.76	0	14	2	12	30	2	20	60	6	67	2	21	23	6
987245	F0700/C	6	P	13	121	30	13	14	6	15	40	23	8.2	8	48	361.45	0	13	2	12	30	2	20	60	6	83	2	23	23	4
990497			H	14	123	29	10	13	5	10	41	24	9.5	9.2	38	500	0	13	1	11	29	3	22	70	8	58	2	15	21	6
990497	F0689	4	P	14	122	28	10	13	5	10	41	23	9.2	9	38	595.74	0	13	1	11	28	2	20	70	7	47	2	17	21	2
990497	F0690/C	4	P	14	121	28	10	13	5	10	41	23	9.3	9.1	38	518.53	0	13	1	11	28	2	21	70	7	54	1	14	19	1

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Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
F1: (Nb+V +Ti)
F2: (Nb+V)
F3: (Cu+Ni+Cr+Mo)
F4: (Al/N)
F5: (Bi)
H: Heat / Colata
Max: Maximum / Massimo
Min: Minimum / Minimo
P: Product / Prodotto
PCM: C+V/10+Mo/15+(Mn+Cu+Cr)/20+Si/30+Ni/60+5B

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Tenaris

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
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Date / Data: **March 05, 2019**	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	**11405700**	**1262592/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZED** **NORMALIZZATI**	Product Type / Tipo di prodotto: **See note nr.1** **Vedi nota nr.1**		Surface / Superficie: **BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **STEEL GR. L360 N/X52 N PSL2** **ACCIAIO L360 N/X52 N PSL2**	Ends / Estremità: **BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**
Dimensions / Dimensioni: **ø 10.748" O.D. x .500" W.T.** **ø 273.00mm O.D. x 12.70mm W.T**	Schedule / Schedula: . .	Length / Lunghezza: **26.247 ft ÷ 38.714 ft** **8000 mm ÷ 11800 mm**	Quantity / Quantità: **94Pcs/Pz** **3366'06" ft** **182588,8 lb** **1026.12 mt** **82821 kg**	Nominal Weight / Peso nominale: **54.78 lb/ft** **81.52 Kg/m**

THROUGH WALL HARDNESS / DUREZZA ATTRAVERSO LO SPESSORE

Required values / Valori richiesti			Individuals / Individuali Min: –	Max: 248.0	Var: –	Average / Media Min: –	Max: –	Var: –	Hardness type / Tipo de dureza: vickers Minimum martensite / martensite minima: (%): –												Formula applied / Formula Applicata	
Heat N°	Sample N°	Lot N°	Specimen condition			Quad.	Scale	OD						MW					ID					
Colata N°	Prova N°	Lotto N°	Ls	Sc			Scala	1	2	3	4	Dist. (mm)	Avg.	1	2	3	4	Avg.	1	2	3	4	Dist. (mm)	Avg.
986803	F0703/C	6	B	N		1	HV10	165.0	165.0	167.0	178.0	- 1.50	168.8	154.0	156.0	151.0	161.0	155.5	157.0	152.0	166.0	165.0	1.5	160.0
987245	F0691/C	5	B	N		1	HV10	154.0	161.0	162.0	162.0	- 1.50	159.8	155.0	153.0	154.0	160.0	155.5	173.0	169.0	177.0	169.0	1.5	172.0
987245	F0699	6	B	N		1	HV10	156.0	162.0	159.0	172.0	- 1.50	162.3	158.0	153.0	154.0	148.0	153.3	159.0	159.0	151.0	165.0	1.5	158.5
990497	F0689	4	B	N		1	HV10	161.0	162.0	158.0	162.0	- 1.50	160.8	153.0	154.0	152.0	164.0	155.8	160.0	152.0	154.0	163.0	1.5	157.3

Avg: Average / Media
B: Body / Corpo
Dist: Distance from outer diameter / Distanza dal diametro esterno
ID: Internal Diameter / Diametro interno
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
MW: Middle Wall / Centro da espessura
N: Normalized / Normalizzato
OD: Outside Diameter / Diametro esterno
Quad: Quadrant / Quadrante
Sc: Specimen condition / Condizioni Provetta
Var: Variation / Variazione

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: KCV				Orientation/Direzione: T		Unit / Unità: JOULE				Shear area / Area duttile %			
Position/Posizione:				Temp: - 50	Unit/Unità: °C	Ind.Min.Req: 38		Req.Min.Avg: 50		Ind.Min.Req: –		Req.Min.Avg: –	
Heat N°	Sample N°	Zone	Lot N°			Size / Dimensioni	Results / Risultato				Results / Risultato			
Colata N°	Prova N°	Zona	Lotto N°	Ls	Sc	mm	1	2	3	Avg.	1	2	3	Avg.
986803	F0703/C	outside	6	B	N	10 x 10.00	159.0	154.0	125.0	146.0	50	50	40	47
987245	F0691/C	outside	5	B	N	10 x 10.00	163.0	144.0	156.0	154.0	55	50	55	53
987245	F0699	outside	6	B	N	10 x 10.00	151.0	61.0	105.0	106.0	50	20	40	37
990497	F0689	outside	4	B	N	10 x 10.00	203.0	147.0	209.0	186.0	70	50	70	63

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Witnessed
Francesco Servalli - Inspector
Milan Office

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Number / Numero:	Page / Pagina:
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Date / Data: **March 05, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T. ø 273.00mm O.D. x 12.70mm W.T.	. .	26.247 ft ÷ 38.714 ft 8000 mm ÷ 11800 mm	3366'06" ft 182588,8 lb 1026.12 mt 82821 kg	54.78 lb/ft 81.52 Kg/m

IMPACT TEST / PROVA DI RESILIENZA

Avg: Average / Media	Minimo singolo richiesto	Req. Min. Avg: Required minimum average / Minima	T: Transversal / Trasversale
B: Body / Corpo	Ls: Location of sample / Ubicazione provetta	media richiesta	Temp: Temperature / Temperatura
Ind. Min. Req: Individual Minimum Required /	N: Normalized / Normalizzato	Sc: Specimen condition / Condizioni Provetta	

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Milan Office

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Date / Data: **March 05, 2019**

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	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 38.714 ft	3366'06" ft 182588,8 lb	54.78 lb/ft
ø 273.00mm O.D. x 12.70mm W.T.	.	8000 mm ÷ 11800 mm	1026.12 mt 82821 kg	81.52 Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	20,5	5	Satisfactory / Soddisfacente

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Milan Office

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:^ Revision year:.... Standard:ISO 3183 Year:2012 Standard:NACE MR0175/ISO 15156 Year:2015	Norma:API 5L Anno:2018 Revisione:^ Anno della revisione:.... Norma:ISO 3183 Anno:2012 Norma:NACE MR0175/ISO 15156 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Product type' SEAMLESS HOT FINISHED ROUND PROFILES FOR METALLIC CONSTRUCTION (WITH EXTRA REQUIREMENTS) Note 2 is the full description of the 'Standard or specification' ACC. TO THE NORM API 5L PSL2 46TH ED., , ISO 3183 PSL2, RL SPEC X52/L360 R 6.4, NACE MR0175/ISO 15156 + TQ 20036287 V4.1	La nota 1 è la descrizione completa del 'Tipo prodotto' PROFILATI CAVI CIRCOLARI S.S. FORMATI A CALDO PER COSTRUZIONI METALLICHE (CON RICHIESTE SUPPLEMENTARI) La nota 2 è la descrizione completa delle 'Norme o specifiche' NORMA API 5L PSL2 46A EDIZ., , ISO 3183 PSL2, RL SPEC X52/L360 R 6.4, NACE MR0175/ISO 15156 + TQ 20036287 V4.1

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	435622-1	**11405700**	**1262592/001**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED **NORMALIZZATI**	**See note nr.1** **Vedi nota nr.1**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 **Vedi nota nr.2**	**STEEL GR. L360 N/X52 N PSL2** **ACCIAIO L360 N/X52 N PSL2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **94Pcs/Pz**	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	**26.247 ft ÷ 38.714 ft**	**3366'06" ft** **182588,8 lb**	**54.78 lb/ft**
ø 273.00mm O.D. x 12.70mm W.T	.	**8000 mm ÷ 11800 mm**	**1026.12 mt** **82821 kg**	**81.52 Kg/m**

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
Country of melt ITALY Continuous casting and Fully killed Quantity detail for heat: please see tally-list	Paese di colaggio acciaio ITALIA Colaggio continuo ed acciaio di tipo calmato Dettaglio tubi per colata: vedere Tally-list

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Lloyd's Register
Witnessed Reviewed
Francesco Servalli - Inspector
Milan Office

Supplementary Information Informazioni supplementari	
AFTER INSPECTION OPERATION, THE MATERIAL HAS NOT A RESIDUAL MAGNETISM GREATER THAN 30 GAUSS HARDNESS HRC 22 MAX, ACCORDING TO NACE MR0175/ISO 15156 ALL PIPES HAVE BEEN TESTED BY ELECTROMAGNETIC TEST . WITH SATISFACTORY RESULT ALL PIPES HAVE BEEN NORMALIZED AT 920 ^C FOR 13 MINS. AND COOLED IN STILL AIR THE WALL THICKNESS, CONTROLLED BY U.T., OF EACH PIPE IS WITHIN THE REQUESTED TOLERANCE . ALL PIPES HAVE BEEN TESTED FOR LAMINATION DETECTION BY U.T., WITH SATISFACTORY RESULT EN ISO 10893-8 LEVEL U3/EN 10246-14 U3. THE ENDS (FOR 300 mm) HAVE BEEN TESTED WITH WET FLUORESCENT MAGNETIC PARTICLES, WITH SATISFACTORY RESULT ALL PIPES HAVE BEEN TESTED BY ULTRASONIC INSPECTION FOR LONGITUDINAL INSIDE/OUTSIDE DEFECTS (NOTCH 5,0 %) ACCORDING TO SPEC. ASTM E213 /EN 10246-7 U2C /ISO 10893-10 U2C	DOPO LE OPERAZIONI DI CONTROLLO, IL MATERIALE NON PRESENTA UN MAGNETISMO RESIDUO SUPERIORE A 30 GAUSS DUREZZA HRC 22 MAX, IN ACCORDO ALLA SPEC. NACE MR0175/ISO 15156 I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO ELETTROMAGNETICO CON ESITO SODDISFACENTE I TUBI SONO STATI NORMALIZZATI A 920 ^C PER 13 MIN. E RAFFREDDATI IN ARIA CALMA LO SPESSORE DEI TUBI, CONTROLLATO CON ULTRASUONI, E' CONFORME ALLE TOLLERANZE RICHIESTE . I TUBI SONO STATI CONTROLLATI PER LA RICERCA DI DOPPI SPESSORI CON ULTRASUONI, CON ESITO POSITIVO EN ISO 10893-8 LEVEL U3/EN 10246-14 U3. LE ESTREMITA' DEI TUBI SONO STATE CONTROLLATE (PER 300 mm) CON PARTICELLE MAGNETICHE FLUORESCENTI UMIDE, CON ESITO SODDISFACENTE TUTTI I TUBI SONO STATI CONTROLLATI CON U.S. PER LA RICERCA DI DIFETTI LONGITUDINALI INTERNI/ESTERNI (TARATURA 5,0 %) IN ACCORDO ALLA SPEC. ASTM E213 /EN 10246-7 U2C /ISO 10893-10 U2C

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	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 38.714 ft	3366'06" ft 182588,8 lb	54.78 lb/ft
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SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARI

Supplementary Information Informazioni supplementari	
WITH SATISFACTORY RESULT SPECIALLY DESULPHURIZED Compliance with chemical composition and mechanical properties of NORSOK M-120 MDS-Y27 Rev. 4/Y22 Rev. 5/EN10225:2009 gr. S355G14+N/G15+N or S355G14+Q/G15+Q(without CTOD testing) We confirm compliance with chemical composition and mechanical properties of NORSOK M-630 MDS-C22 Rev. 5 grade L360N or L360Q UT full length SEAMLESS HOT FINISHED PIPES VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. MANUFACTURED BY TENARIS DALMINE NO WELD REPAIR, MERCURY AND RADIATION FREE AS PER STANDARD, PIPES CAN BE REPAIRED; MANUFACTURER SHOULD DECIDE TO GRIND THE SURFACE OF THE PIPES WHEN, DURING FINAL VISUAL INSPECTION, SOME IMPERFECTIONS ARE DETECTED. THE RESULTED SURFACE AREAS, AFTER GRINDING, HAS DIFFERENT COLORATION COMPARED WITH USUAL ONE AS MANUFACTURED. THE RESIDUAL WALL THICKNESS AFTER GRINDING HAS BEEN CHECKED RESULTING IN TOLERANCE WITH STANDARD. Tenaris IT identification number for MTC: 582_~5.*	CON ESITO SODDISFACENTE VIS/DIM. Lloyd's Register EMEA A member of the Lloyd's Register group Witnessed ☐ Monitored ☐ Reviewed Francesco Servalli - Inspector Milan Office TUBI SENZA SALDATURA FINITI A CALDO IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE. FABBRICATO DA TENARIS DALMINE NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI COME DA PROCEDURA STANDARD, I TUBI POSSONO ESSERE RIPARATI; IL COSTRUTTORE DOVREBBE PROCEDERE ALLA RETTIFICA DELLA LORO SUPERFICIE QUANDO DURANTE L'ISPEZIONE VISIVA FINALE VENGONO RILEVATE DELLE IMPERFEZIONI. DOPO LA RETTIFICA, LE AREE SUPERFICIALI INTERESSATE PRESENTANO UNA COLORAZIONE DIVERSA RISPETTO A QUELLA ORIGINALE. LO SPESSORE RESIDUO DELLE PARETI RIENTRA NELLA SOGLIA DI TOLLERANZA. Numero Identificativo Tenaris IT per MTC: 582_~5.*

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

Tenaris

Dalmine SPA - Dalmine Plant
Piazza Caduti 6 luglio 1944, 1
24044 Dalmine (BG) - Italy

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02623	**9 / 10**
Date / Data: **March 05, 2019**	

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	**11405700**	**1262592/001**

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED **NORMALIZZATI**	**See note nr.1** **Vedi nota nr.1**	**BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH** **GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE**

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 **Vedi nota nr.2**	**STEEL GR. L360 N/X52 N PSL2** **ACCIAIO L360 N/X52 N PSL2**	**BEVEL API 5L / ISO 3183 CT4:8825** **SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825**

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: **94Pcs/Pz**	Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	**26.247 ft ÷ 38.714 ft**	**3366'06" ft** **182588,8 lb**	**54.78 lb/ft**
ø 273.00mm O.D. x 12.70mm W.T.	.	**8000 mm ÷ 11800 mm**	**1026.12 mt** **82821 kg**	**81.52 Kg/m**

MARKING / MARCATURA

Marking Marcatura	
STENCILING _T ISO 3183 API Spec 5L 0038.1 _API _DATA 273 12,70 L360N/X52N PSL 2 SMLS HEAT: _COLATA MT _MT KG _KG NR. _NR PO: 435622-1 - LEGEND _T = TENARIS Logo _API = API Logo _DATA = Marking Date _COLATA = Heat Number _MT = Pipe/Tube Length in meters _KG = Pipe/Tube Weight in kilograms _NR = Pipe/Tube identifier	VERNICIATURA _T ISO 3183 API Spec 5L 0038.1 _API _DATA 273 12,70 L360N/X52N PSL 2 SMLS HEAT: _COLATA MT _MT KG _KG NR. _NR PO: 435622-1 - LEGENDA _T = Logo TENARIS _API = Logo API _DATA = Data di marcatura _COLATA = Numero di colata _MT = Lunghezza del tubo in metri _KG = Peso del tubo in chilogrammi _NR = Identificativo numerico del tubo
PUNCHING _T ISO 3183 API Spec 5L 0038.1 _API _DATA L360N/X52N PSL 2 _COLATA NR. _NR LEGEND _T = TENARIS Logo _API = API Logo _DATA = Punching Date _NR = Pipe/Tube identifier	PUNZONATURA _T ISO 3183 API Spec 5L 0038.1 _API _DATA L360N/X52N PSL 2 _COLATA NR. _NR LEGENDA _T = Logo TENARIS _API = Logo API _DATA = Data di punzonatura _NR = Identificativo numerico del tubo

Lloyd's Register EMEA
A member of the Lloyd's Register group
Witnessed Reviewed
Francesco Servalli - Inspector
Milan Office

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Tenaris

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INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.2 / ISO 10474 3.2)

Number / Numero:	Page / Pagina:
01-19-02623	10 / 10

Date / Data: **March 05, 2019**

Customer / Cliente:	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacturer's Works Order N° / Conferma-Posizione:
	435622-1	11405700	1262592/001

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Superficie:
NORMALIZED NORMALIZZATI	See note nr.1 Vedi nota nr.1	BARE INSIDE, EXTERNALLY PROTECTED BY VARNISH GREZZI INTERNAMENTE, OLEATI ESTERNAMENTE

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estremità:
See note nr.2 Vedi nota nr.2	STEEL GR. L360 N/X52 N PSL2 ACCIAIO L360 N/X52 N PSL2	BEVEL API 5L / ISO 3183 CT4:8825 SMUSSATI SECONDO API 5L / ISO 3183 CT4:8825

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 94Pcs/Pz		Nominal Weight / Peso nominale:
ø 10.748" O.D. x .500" W.T.	.	26.247 ft ÷ 38.714 ft	3366'06" ft	182588,8 lb	54.78 lb/ft
ø 273.00mm O.D. x 12.70mm W.T.	.	8000 mm ÷ 11800 mm	1026.12 mt	82821 kg	81.52 Kg/m

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance w purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Si certifica che il prodotto descritto è stato prodotto, provato, testato e controllato in conformità ai requisiti dell'ordine del cliente. Questo certificato non è una dichiarazione d'origine e non può essere usato come tale.

CUSTOMER THIRD PARTY	TENARIS QUALITY DEPARTMENT SIGNATURE	
INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' TUNICE Alessandro	CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' FERRARI Donigio

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Lloyd's Register
Witnessed
Francesco Servalli - Inspector
Milan Office

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Loading order
Number
Enclouse _____

Dimensional and visual inspection certificate

Plant : Dalmine

Customer's order : 435622-1

Mill order : 1262592/001
EXP Reference : C/54/021
Part Number : 11405700 **********

Product : SEAMLESS HOT FINISHED ROUND PROFILES FOR METALLIC CONSTRUCTION (WITH EXTRA REQUIREMENTS) ACC. TO THE NORM API 5L PSL2 46TH ED., , ISO 3183 PSL2, RL SPEC X52/L360 R 6.4, NACE MR0175/ISO 15156 + TQ 20036287 V4.1 STEEL GR. L360 N/X52 N PSL2 NORMALIZED BARE INSIDE, EXTERNALLY PROTECTED

Dimensions :

From mm	From Ft	To mm	To Ft	Diam. mm	Diam Inch	W. T. mm	W.T. Inch
8000	26	11800	39	273,00	10.748	12,70	.500

	Pieces	Mt	Kg	Feet	Lbs
Ordered quantity :		1000,00	83966	3280'10"	185113
Previous inspected Quantity :	_____	_____	_____	_____	_____
Total inspected :	_____	_____	_____	_____	_____

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
1	OK	1	10,38	833,00	34'01"	1836,45	986803	6					1902623		464190440045
2	OK	1	10,80	877,00	35'05"	1933,45	986803	6					1902623		564190440046
3	OK	1	10,65	863,00	34'11"	1902,59	986803	6					1902623		764190440047
6	OK	1	9,46	758,00	31'00	1671,10	986803	6					1902623		564190440050
		4	41,29	3331,00	135'06"	7343,59	Total heat-lot		006						
		4	41,29	3331,00	135'06"	7343,59	Tot heat		986803						
56	OK	1	10,32	836,00	33'10"	1843,06	987245	5					1902623		564190440100
57	OK	1	10,33	831,00	33'11"	1832,04	987245	5					1902623		464190440101
59	OK	1	10,37	840,00	34'00	1851,88	987245	5					1902623		364190440103
61	OK	1	10,80	863,00	35'05"	1902,59	987245	5					1902623		164190440105
63	OK	1	10,69	866,00	35'01"	1909,20	987245	5					1902623		964190440107
64	OK	1	10,83	877,00	35'06"	1933,45	987245	5					1902623		064190440108
65	OK	1	10,45	840,00	34'03"	1851,88	987245	5					1902623		864190440109
66	OK	1	10,77	864,00	35'04"	1904,79	987245	5					1902623		864190440110
67	OK	1	10,81	876,00	35'06"	1931,25	987245	5					1902623		264190440111
68	OK	1	10,80	865,00	35'05"	1907,00	987245	5					1902623		064190440112
69	OK	1	10,72	870,00	35'02"	1918,02	987245	5					1902623		164190440113
70	OK	1	10,74	858,00	35'03"	1891,56	987245	5					1902623		964190440114
71	OK	1	10,77	871,00	35'04"	1920,22	987245	5					1902623		464190440115
75	OK	1	10,40	835,00	34'01"	1840,86	987245	5					1902623		664190440119
76	OK	1	10,71	858,00	35'02"	1891,56	987245	5					1902623		364190440120
77	OK	1	10,90	883,00	35'09"	1946,68	987245	5					1902623		964190440121
78	OK	1	10,49	853,00	34'05"	1880,54	987245	5					1902623		664190440122
79	OK	1	10,33	831,00	33'11"	1832,04	987245	5					1902623		564190440123
80	OK	1	10,22	829,00	33'06"	1827,63	987245	5					1902623		264190440124
81	OK	1	10,58	857,00	34'09"	1889,36	987245	5					1902623		764190440125
82	OK	1	10,70	858,00	35'01"	1891,56	987245	5					1902623		164190440126
84	OK	1	10,80	877,00	35'05"	1933,45	987245	5					1902623		864190440128
85	OK	1	10,77	862,00	35'04"	1900,38	987245	5					1902623		064190440129
86	OK	1	10,70	869,00	35'01"	1915,81	987245	5					1902623		064190440130
87	OK	1	10,58	847,00	34'09"	1867,31	987245	5					1902623		664190440131
88	OK	1	10,56	855,00	34'08"	1884,95	987245	5					1902623		864190440132
89	OK	1	10,65	854,00	34'11"	1882,75	987245	5					1902623		764190440133
90	OK	1	10,73	869,00	35'02"	1915,81	987245	5					1902623		464190440134

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Witnessed: Reviewed:
Francesco Servalli Inspector
Milan Office

Technical marking : MARKING AS INDIC. IN TECHN. SPEC.

Date TenarisDalmine Ispection Dpt.

Loading order
Number
Enclouse

Dimensional and visual inspection certificate

Plant : Dalmine

Customer's order : 435622-1

Mill order : 1262592/001
EXP Reference : C/54/021
Part Number : 11405700

****

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
91	OK	1	10,65	862,00	34'11"	1900,38	987245	5					1902623		964190440135
92	OK	1	10,34	832,00	33'11"	1834,24	987245	5					1902623		364190440136
93	OK	1	10,73	859,00	35'02"	1893,77	987245	5					1902623		164190440137
94	OK	1	10,59	849,00	34'09"	1871,72	987245	5					1902623		564190440138
		32	339,83	27396,00	1114'11"	60397,74	Total heat-lot		005						
4	OK	1	10,51	843,00	34'06"	1858,49	987245	6					1902623		364190440048
5	OK	1	10,66	864,00	35'00	1904,79	987245	6					1902623		664190440049
7	OK	1	10,71	856,00	35'02"	1887,15	987245	6					1902623		464190440051
8	OK	1	10,82	877,00	35'06"	1933,45	987245	6					1902623		264190440052
9	OK	1	10,73	860,00	35'02"	1895,97	987245	6					1902623		364190440053
10	OK	1	10,81	876,00	35'06"	1931,25	987245	6					1902623		664190440054
11	OK	1	10,80	875,00	35'05"	1929,04	987245	6					1902623		164190440055
12	OK	1	10,64	850,00	34'11"	1873,93	987245	6					1902623		764190440056
13	OK	1	10,78	861,00	35'04"	1898,16	987245	6					1902623		964190440057
14	OK	1	10,83	870,00	35'06"	1918,02	987245	6					1902623		064190440058
15	OK	1	10,66	856,00	35'00	1887,15	987245	6					1902623		864190440059
16	OK	1	10,73	869,00	35'02"	1915,81	987245	6					1902623		764190440060
17	OK	1	11,66	937,00	38'03"	2065,73	987245	6					1902623		164190440061
18	OK	1	10,58	847,00	34'09"	1867,31	987245	6					1902623		464190440062
19	OK	1	10,75	872,00	35'03"	1922,43	987245	6					1902623		064190440063
20	OK	1	10,71	857,00	35'02"	1889,36	987245	6					1902623		864190440064
21	OK	1	10,56	855,00	34'08"	1884,95	987245	6					1902623		364190440065
22	OK	1	11,75	954,00	38'07"	2103,21	987245	6					1902623		964190440066
23	OK	1	11,67	935,00	38'03"	2061,32	987245	6					1902623		664190440067
24	OK	1	10,24	832,00	33'07"	1834,24	987245	6					1902623		264190440068
25	OK	1	11,21	910,00	36'09"	2006,20	987245	6					1902623		564190440069
26	OK	1	10,93	875,00	35'10"	1929,04	987245	6					1902623		364190440070
27	OK	1	10,95	890,00	35'11"	1962,11	987245	6					1902623		964190440071
28	OK	1	11,14	894,00	36'07"	1970,93	987245	6					1902623		664190440072
29	OK	1	10,78	862,00	35'04"	1900,38	987245	6					1902623		564190440073
30	OK	1	10,75	869,00	35'03"	1915,81	987245	6					1902623		264190440074
31	OK	1	11,12	903,00	36'06"	1990,77	987245	6					1902623		764190440075
32	OK	1	10,89	882,00	35'09"	1944,47	987245	6					1902623		164190440076
33	OK	1	10,61	850,00	34'10"	1873,93	987245	6					1902623		464190440077
34	OK	1	10,68	854,00	35'00	1882,75	987245	6					1902623		864190440078
40	OK	1	10,64	862,00	34'11"	1900,38	987245	6					1902623		464190440084
43	OK	1	10,90	882,00	35'09"	1944,47	987245	6					1902623		164190440087
		32	347,20	27979,00	1139'01"	61683,02	Total heat-lot		006						
		64	687,03	55375,00	2254'00	122080,76	Tot heat		987245						
35	OK	1	11,33	923,00	37'02"	2034,86	990497	4					1902623		064190440079
36	OK	1	11,42	919,00	37'06"	2026,05	990497	4					1902623		064190440080
37	OK	1	11,59	943,00	38'00	2078,96	990497	4					1902623		664190440081
38	OK	1	11,34	912,00	37'02"	2010,61	990497	4					1902623		864190440082
39	OK	1	11,47	921,00	37'08"	2030,46	990497	4					1902623		764190440083
41	OK	1	11,40	929,00	37'05"	2048,09	990497	4					1902623		964190440085

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Witnessed Reviewed
Francesco Servalli - Inspector
Milan Office

Technical marking : MARKING AS INDIC. IN TECHN. SPEC.

Date
05.03.2019

TenarisDalmine

Ispection Dpt.
DONIGIO FERRARI

Loading order
Number
Enclouse

Dimensional and visual inspection certificate

Plant : Dalmine

Customer's order : 435622-1

Mill order : 1262592/001
EXP Reference : C/54/021
Part Number : 11405700

****

Inspected pieces

Tube/Bundle	st	Pieces	Length mt	Weight kg	Length ft	Weight lbs	Heat	Lot	TT nr	test	T. Test	C. ID Coupl + Heat	MTC nr	ID external heat	URC
42	OK	1	11,40	917,00	37'05"	2021,64	990497	4					1902623		364190440086
44	OK	1	11,45	931,00	37'07"	2052,50	990497	4					1902623		564190440088
45	OK	1	11,38	914,00	37'04"	2015,02	990497	4					1902623		264190440089
46	OK	1	11,53	927,00	37'10"	2043,68	990497	4					1902623		264190440090
47	OK	1	11,50	928,00	37'09"	2045,89	990497	4					1902623		864190440091
48	OK	1	11,56	943,00	37'11"	2078,96	990497	4					1902623		564190440092
49	OK	1	11,57	941,00	38'00	2074,55	990497	4					1902623		964190440093
50	OK	1	11,38	927,00	37'04"	2043,68	990497	4					1902623		164190440094
51	OK	1	11,39	915,00	37'04"	2017,23	990497	4					1902623		664190440095
52	OK	1	11,50	937,00	37'09"	2065,73	990497	4					1902623		064190440096
53	OK	1	11,59	944,00	38'00	2081,16	990497	4					1902623		364190440097
54	OK	1	11,38	919,00	37'04"	2026,05	990497	4					1902623		764190440098
55	OK	1	11,42	932,00	37'06"	2054,71	990497	4					1902623		464190440099
58	OK	1	11,41	921,00	37'05"	2030,46	990497	4					1902623		264190440102
60	OK	1	11,56	944,00	37'11"	2081,16	990497	4					1902623		664190440104
62	OK	1	11,46	921,00	37'07"	2030,46	990497	4					1902623		764190440106
72	OK	1	11,61	946,00	38'01"	2085,57	990497	4					1902623		564190440116
73	OK	1	11,45	922,00	37'07"	2032,66	990497	4					1902623		764190440117
74	OK	1	11,50	939,00	37'09"	2070,14	990497	4					1902623		364190440118
83	OK	1	11,21	900,00	36'09"	1984,16	990497	4					1902623		464190440127
		26	297,80	24115,00	977'00	53164,44	Total heat-lot		004						
		26	297,80	24115,00	977'00	53164,44	Tot heat		990497						
		94	1026,12	82821,00	3366'06"	182588,79	Total amount of pieces passed by inspection								

Lloyd's Register EMEA
A member of the Lloyd's Register group
Lloyd's Register
Witnessed ~~Inspected~~ ~~Reviewed~~
Francesco Servalli - Inspector
Milan Office

Technical marking : MARKING AS INDIC. IN TECHN. SPEC.

Date
05.03.2019

TenarisDalmine

Ispection Dpt.
DONIGIO FERRARI

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

B 25982/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
10.950 tons - lbs	100.53 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 323.80 x 14.27 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
5	T12/079-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Bill:

Transport:

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		C	Mn	Si	S	P	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	B	N
			Max	0.16	1.65	0.45	0.010	0.020	0.35	0.55	0.35	0.060	0.10	0.090	0.050	0.040	0.0005	0.0120
			Min	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
264212		Heat analysis		0.15	1.21	0.21	0.003	0.013	0.09	0.09	0.17	0.023	0.02	0.060	0.001	0.002	0.0001	0.0087
41960K		Heat analysis		0.16	1.20	0.21	0.003	0.011	0.04	0.04	0.09	0.023	0.01	0.077	0.001	0.002	0.0001	0.0075
807765		Heat analysis		0.14	1.23	0.23	0.001	0.009	0.11	0.09	0.19	0.025	0.02	0.070	0.002	0.003	0.0001	0.0089
807766		Heat analysis		0.14	1.22	0.21	0.002	0.009	0.11	0.10	0.17	0.029	0.02	0.065	0.003	0.003	0.0001	0.0075
264212	22-799	Product analysis		0.15	1.21	0.21	0.003	0.011	0.08	0.08	0.16	0.026	0.02	0.060	0.001	0.003	0.0001	0.0085
264212	22-799	Product analysis		0.14	1.22	0.22	0.003	0.012	0.08	0.08	0.16	0.025	0.02	0.060	0.001	0.003	0.0001	0.0083
41960K	22-799	Product analysis		0.15	1.20	0.23	0.002	0.010	0.04	0.05	0.10	0.024	0.01	0.075	0.001	0.003	0.0001	0.0072
41960K	22-799	Product analysis		0.15	1.21	0.23	0.003	0.010	0.04	0.05	0.10	0.024	0.01	0.075	0.001	0.003	0.0001	0.0071
807765	22-799	Product analysis		0.14	1.25	0.22	0.001	0.008	0.10	0.09	0.18	0.027	0.02	0.068	0.002	0.003	0.0001	0.0086
807765	22-799	Product analysis		0.13	1.25	0.23	0.001	0.008	0.10	0.09	0.18	0.027	0.02	0.067	0.002	0.003	0.0001	0.0088
807766	22-799	Product analysis		0.14	1.23	0.22	0.002	0.010	0.10	0.09	0.16	0.031	0.02	0.063	0.002	0.003	0.0001	0.0076
807766	22-799	Product analysis		0.14	1.24	0.22	0.002	0.009	0.10	0.09	0.16	0.030	0.02	0.064	0.002	0.003	0.0001	0.0074

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Fiz. Antonica Sergiu

Inspector/Buyer representative

2314/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

B 25982/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
10.950 tons - lbs	100.53 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 323.80 x 14.27 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
5	T12/079-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.		Al / N	Nb + V	Nb + Ti + V	CE_IIW
			Max	-	0.100	0.150	0.42
			Min	2.00	-	-	-
264212		Heat analysis		2.64	0.061	0.063	0.40
41960K		Heat analysis		3.07	0.078	0.080	0.39
807765		Heat analysis		2.81	0.072	0.075	0.40
807766		Heat analysis		3.87	0.068	0.071	0.40
264212	22-799	Product analysis		3.06	0.061	0.064	0.40
264212	22-799	Product analysis		3.01	0.061	0.064	0.39
41960K	22-799	Product analysis		3.33	0.076	0.079	0.39
41960K	22-799	Product analysis		3.38	0.076	0.079	0.39
807765	22-799	Product analysis		3.14	0.070	0.073	0.40
807765	22-799	Product analysis		3.07	0.069	0.072	0.39
807766	22-799	Product analysis		4.08	0.065	0.068	0.40
807766	22-799	Product analysis		4.05	0.066	0.069	0.40

CEpcm = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B CE_S = C+Mn/6 CE_{IIW} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Fiz. Antonica Sergiu

Inspector/Buyer representative

2315/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

B 25982/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
10.950 tons - lbs	100.53 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 323.80 x 14.27 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
5	T12/079-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm²	inch²							
264212	Longitudinal Flat	50.8	-	40.00	-	15.10	-	604.0	-	22-3238	424.00	-	526.00	-	41.30	0.81
41960K	Longitudinal Flat	50.8	-	40.00	-	15.30	-	612.0	-	22-3238	424.00	-	527.00	-	41.60	0.80
807765	Longitudinal Flat	50.8	-	40.00	-	14.80	-	592.0	-	22-3238	422.00	-	525.00	-	40.90	0.80
807766	Longitudinal Flat	50.8	-	40.00	-	15.70	-	628.0	-	22-3238	426.00	-	530.00	-	41.90	0.80

Impact Test

Heat	Impact Test Bulletin No.	Orientation	Size (mm)	Temp. (°C)	Req.KV (min. J)	KV values (J)			Req.Avr. (min. J)	Avr. fracture energy (J)	KCU min:-J/cm² T:°C			Shear Area min. %			Lateral Expansion min. mm		
264212	22-4926	Transversal	10x10x55	0	-	169	175	188	27.0	177	-	-	-	95	95	95	1.52	1.58	1.70
41960K	22-4926	Transversal	10x10x55	0	-	191	180	166	27.0	179	-	-	-	95	95	95	1.71	1.62	1.49
807765	22-4926	Transversal	10x10x55	0	-	186	173	195	27.0	185	-	-	-	95	95	95	1.68	1.56	1.74
807766	22-4926	Transversal	10x10x55	0	-	171	178	187	27.0	179	-	-	-	95	95	95	1.54	1.60	1.67

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Fiz. Antonica Sergiu

Inspector/Buyer representative

2316/ 3402

Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR., BL 15, SC.A, PARTER I ROMAN, NEAMT COUNTY	**MILL TEST CERTIFICATE** **according to EN 10204/3.2/2004** -	Page 4/5 **B 25982/1** **16.09.2022**	ArcelorMittal

Buyer: PROJECT MATERIALS GMBH Schiessstr. 68, 40549 DUSSELDORF; GERMANY	STANDARD SEAMLESS PIPES	Total weight: 10.950 tons - lbs	Total Length: 100.53 meters - feets	Pieces: 9 Bundles: -
Buyer's reference: PO NO: 5279-22 REV 2 **Contract: 50005515**	**Standard:** API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;			
	Dimensions: 323.80 x 14.27 mm -	Schedule: -	Length: 10.00 - 12.00 m -	- -

Item	Item Client	Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade:
5	T12/079-01/S355KL0		205	-	20.5	5	X52NO-PSL2 -

Heat

Heat	Pieces	Length (m)	Weight (kg)
264212	6	-	-
41960K	1	-	-
807765	1	-	-
807766	1	-	-

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative

Fiz. Antonica Sergiu

Inspector/Buyer representative

2317/ 3402

Manufacturer:
ArcelorMittal Tubular Products Roman S.A.
STEFAN CEL MARE STR., BL 15, SC.A, PARTER I
ROMAN, NEAMT COUNTY

MILL TEST CERTIFICATE

according to EN 10204/3.2/2004

-

B 25982/1

16.09.2022

ArcelorMittal

Buyer: PROJECT MATERIALS GMBH

Schiessstr. 68, 40549 DUSSELDORF;
GERMANY

STANDARD SEAMLESS PIPES

Total weight:	Total Length:	Pieces	Bundles
10.950 tons - lbs	100.53 meters - feets	9	-

Standard: API 5L ED.46-2018-PSL2+Anexa J ; Spec. GS-EP-STR-201, REV.15 & TOTAL-GS STR 201-REV.12 vs REV.13 vs 15 with PM Piping-03.05.2022;

Buyer's reference: PO NO: 5279-22 REV 2

Contract 50005515

Dimensions: 323.80 x 14.27 mm
-

Schedule: -

Length: 10.00 - 12.00 m
-

-
-

Item	Item Client
5	T12/079-01/S355KL0

Hydro Test:	Bar	PSI	MPa	Time(sec)
	205	-	20.5	5

Steel Grade: X52NO-PSL2
-

Remarks

Manufacturing process – hot rolling.
Hot finished, steel is fully killed and vacuum degassing, fine grained practice, produced by electric furnace, source, ABS ITALIA ACCIAIERIE BERTOLI SAFAU Via Buttrio no. 28, Frazione Cargnacco,33050 Pozzuolo del Friuli (UD), ITALY, Liberty OSTRAVA a.s Vratimovska 689/117, 719 00 Slezska Ostrava-Kuncice, Czechia, ABS SISAK DOO B. KAVURICA 12 44010 SISAK, CROATIA
Visual inspection and dimensional check without objection.
Applied heat treatment normalizing with end of rolling temperature.
NDT full body:
- 100% ultrasonic method, longitudinal, outside and inside with reference standard 5%(U2/C) notch- cf.ISO 10893/10– satisfactory.
- ultrasonic thickness measurements, the coverage with ≥ 25% of the pipe surface -cf. ISO 10893/12-satisfactory.
- detection of laminar imperfection on the pipe body with ≥ 20% surface coverage (U3) -acc. ISO 10893/8-satisfactory.
NDT for the pipe ends:
- automated ultrasonic inspection for: longitudinal imperfections, outside & inside, acceptance level U2/C (5% of WT)-cf. ISO 10893/10-satisfactory.
- ultrasonic inspection for detection laminar imperfections on the 50 mm wide zone at each pipe ends.
Residual magnetism check - satisfactory.
Hydrostatic test hold for 5 sec. no leakage noticed.
The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

We state on our sole responsibility that the delivered products are in conformity with the order requirements.

Quality Control Representative
Fiz. Antonica Sergiu

Inspector/Buyer representative

2318/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723000863	123A40D	Q012301217

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **26.07.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300117 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH** Office: **Vienna**
voestalpine-Straße 3, 4020 Linz, Austria

Clients Order Number: **3500684** Date: **21-07-2023**

Order Status: **complete**

Inspection Dates
First: **12-07-2023** final: **12-07-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723000863 123A40C**

Description:

1 piece(s) of steel plate(s) **5961 kg** , as per attached inspection Certificate no.: **A0376574**

Specification

S355ML EN 10025-4:2019 + EN 10025-1:2004

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

26-JUL-2023

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300117-3 K

Z02 Date 21-07-2023

A04 manufacturer's work symbol
voestalpine

A03 Document number	A0376574	A08 Order-No.:	3500684	A07 OrderDat.	23-05-2023	Date of dispatch	20-07-2023 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1723000863 123A40C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: hot rolled plates of structural steels

B02 Material: S355ML

B03 Standard: EN 10025-4:2019 + EN 10025-1:2004

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
RIGASSIFICATORE SNAM - DECK

B03 - Supplementary requirements
MATERIAL IS ACC. TO PO 123A40-MTO-ST-002 // MATERIAL IS ACCORDING TO EN10025-4 OPTIONS 1, 6 AND 7.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
758016	191257/1	80	25,00	2500,0	12000	1		5.961	85377	1PLATCS25049
		Sum				**1**		**5.961**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA

26-JUL-2023

voestalpine
AHEAD.

Chemical composition (Heat analysis)

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %
Set values >=						.020										
Set values <=	.140	.500	1.600	.025	.0200		.300	.500	.100	.550	.100	.050	.050	.0150		.39
758016	.032	.320	1.370	.006	.0008	.052	.122	.015	.002	.013	.004	.026	.012	.0053	.0002	.29

C99 - Supplementary information

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %
Set values >=							345	345	470		22.0
Set values <=									630		
758016	191257	30,0	25.40	F	O	T	521	520	538	A5	26.5

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Reh: Yield Strength
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Hopfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

	B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
	>=						-40	50	50	50	50
Set values	<=										
	758016	190342	CV 10x10	F	ZB2	L	-40	299	330	355	328

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
ZB2: 2mm below surface
C02;Dir:
L: longitudinal
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
ONE STEP AHEAD.

CE

0769

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML

EN 10025-4:2019 + EN 10025-1:2004 S355ML

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Hopfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
SHAPE AHEAD.

UK CA

Pressure Equipment (Safety) Regulations 2016 No. 1105

0836 - Uni Karlsruhe BBA

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML

EN 10025-4:2019 + EN 10025-1:2004 S355ML

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JUL-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA

26-JUL-2023

voestalpine
AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723000863	123A40D	Q012301215

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

26.07.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300117 / 1A1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3500684**

Date: **31-07-2023**

Order Status: **incomplete**

Inspection Dates
First: **03-07-2023**

final: **14-07-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723000863 123A40C**

Description:

17 piece(s) of steel plate(s) **120060 kg** , as per attached inspection Certificate no.: **A0376570_Rev_A1**

Specification

S355ML Z35 EN 10025-4:2019 + EN 10025-1:2004

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

This certificate replaces certificate number AUT 2300117 / 1 issued on 26-07-2023 which is hereby cancelled.

LRQA Austria GmbH
[x] Witnessed [ ] Monitored [x] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2
AUT2300117-1A1

Z02 Date 31-07-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376570 Rev. A1	A08 Order-No.:	3500684	A07 OrderDat.	23-05-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	hot rolled plates of structural steels		
		B02 Material	S355ML Z35	B03 Standard	EN 10025-4:2019 + EN 10025-1:2004
A07 OrderNo.	1723000863 123A40C	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
RIGASSIFICATORE SNAM - DECK

B03 - Supplementary requirements
MATERIAL IS ACC. TO PO 123A40-MTO-ST-002 // MATERIAL IS ACCORDING TO EN10025-4 OPTIONS 1, 6 AND 7.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
757814	190269/1	10	50,00	3050,0	10600	1		13.017	85321	19-07-2023	1PLATCS50043
757814	190270/1	10	50,00	3050,0	10600	1		12.968	85305	18-07-2023	1PLATCS50043
758016	190342/11	20	30,00	2200,0	10500	1		5.528	85324	19-07-2023	1PLATCS30054
758016	190342/21	20	30,00	2200,0	10500	1		5.530	85328	19-07-2023	1PLATCS30054
758016	190343/1	20	30,00	2200,0	10500	1		5.527	85329	19-07-2023	1PLATCS30054
758016	190343/2	20	30,00	2200,0	10500	1		5.530	85311	19-07-2023	1PLATCS30054
758016	191243/1	60	50,00	3050,0	7000	1		8.565	85181	14-07-2023	1PLATCS50043
758016	191244/1	60	50,00	3050,0	7000	1		8.565	85198	14-07-2023	1PLATCS50043
758016	191252/2	40	30,00	2200,0	9350	1		4.921	85328	19-07-2023	1PLATCS30054
758016	191252/1	40	30,00	2200,0	9350	1		4.921	85328	19-07-2023	1PLATCS30054
758016	191253/1	70	30,00	2500,0	12000	1		7.150	85354	20-07-2023	1PLATCS30054
758016	191254/1	70	30,00	2500,0	12000	1		7.146	85321	19-07-2023	1PLATCS30054
758016	191255/1	70	30,00	2500,0	12000	1		7.149	85243	17-07-2023	1PLATCS30054
758016	191256/1	70	30,00	2500,0	12000	1		7.149	85305	18-07-2023	1PLATCS30054

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
LRQA
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
758016	191381/1	30	30,00	2500,0	7500	1		4.479	85303	18-07-2023	1PLATCS30054
863889	190271/1	50	40,00	3000,0	6200	1		5.955	85201	14-07-2023	1PLATCS40049
863889	190271/2	50	40,00	3000,0	6200	1		5.960	85249	17-07-2023	1PLATCS40049
		Sum				17		120.060			

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis)

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Cae %	MN_S
	>=						.020											
Set values	<=	.140	.500	1.600	.025	.0050		.300	.500	.100	.550	.100	.050	.050	.0150		.40	
757814		.031	.336	1.370	.007	.0005	.043	.123	.012	.004	.014	.004	.026	.013	.0053	.0002	.29	2740.00
758016		.032	.320	1.370	.006	.0008	.052	.122	.015	.002	.013	.004	.026	.012	.0053	.0002	.29	1712.50
	>=						.020											
Set values	<=	.140	.500	1.600	.025	.0050		.300	.500	.100	.550	.100	.050	.050	.0150		.39	
758016		.032	.320	1.370	.006	.0008	.052	.122	.015	.002	.013	.004	.026	.012	.0053	.0002	.29	
863889		.031	.334	1.350	.008	.0006	.036	.123	.015	.004	.016	.004	.026	.012	.0060	.0002	.28	

C99 - Supplementary information

MN_S: MN/S
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Reh MPa	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %
	>=						335	335	450		22.0
Set values	<=								610		
757814	190270	Ø	10.01	F	V	T	499	501	559	A5	24.7
758016	191384	Ø	10.00	F	V	T		405	533	A5	33.0
	>=						345	345	470		22.0
Set values	<=								630		
758016	190342	30,0	30.51	F	O	T	502	502	530	A5	29.4
863889	190271	30,0	40.74	F	O	T	482	477	548	A5	24.1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Reh: Yield Strength
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	50	50	50	50
Set values <=										
757814	190270	CV 10x10	F	V	L	-40	322	341	333	332
758016	190342	CV 10x10	F	ZB2	L	-40	299	330	355	328
	191253	CV 10x10	F	ZB2	L	-40	343	358	361	354
	191243	CV 10x10	F	V	L	-40	328	329	334	330
863889	190271	CV 10x10	F	V	L	-40	333	350	365	349

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
ZB2: 2mm below surface
C02;Dir:
L: longitudinal
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						25	25	25	35
757814	190270	Ø	9.95	F	S	84	85	85	85
758016	190342	Ø	9.97	F	S	85	86	86	86
863889	190271	Ø	9.98	F	S	85	84	86	85

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

CE

0769

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML Z35

EN 10025-4:2019 + EN 10025-1:2004 S355ML Z35

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Signature
Date:
Ref. No.:
Office: Vienna

08-AUG-2023

voestalpine
ONE STEP AHEAD.

UK CA

Pressure Equipment (Safety) Regulations 2016 No. 1105

0836 - Uni Karlsruhe BBA

voestalpine Grobblech GmbH, voestalpine-Straße 3, 4020 Linz, Austria

23

EN 10025-4:2019 + EN 10025-1:2004 S355ML Z35

EN 10025-4:2019 + EN 10025-1:2004 S355ML Z35

Download of Declaration of Performance (DoP) see www.voestalpine.com/stahl/en/The-Steel-Division/Download-Center

intended to be used in metal structures or in composite metal and concrete structures

Tolerances on dimensions	EN 10029/10
elongation	EN 10025-4:2019 + EN 10025-1:2004
Tensile Strength	
Yield Strength	
Impact energy	
Weldability	
Durability	
Hazardous substances	no performance determined
Reaction to fire	Class A1 according EN13501-1 and EN1090-1

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 60
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 20, 30, 40, 50, 70
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-AUG-2023

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301578

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 27.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

EN 10204 - 3.2

N141TW6R-11

A03 Document number	**A0366080/A**	**A08 Order-No.:**	**0500036**	**A07 OrderDat.**	09-01-2020	**Date of dispatch**	10-04-2020 400F

A06 Customer
Kroeger Staal B.V.
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product Plate

B02 Material S460G2+M Z35 NORSOK MDS Y40 **B03 Standard** EN 10225 : 2009

A07 OrderNo. 6585

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

A10 - Supplementary information
STOCK ORDER

B03 - Supplementary requirements
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
ITEM 10,100+220: MATERIALIS ACCORDING TO EN10225 OPTIONS 2, 6, 12, 13, 18 AND 28
ITEM 240,300,320+390: MATERIAL IS ACCORDING TO EN10225 OPTIONS 2, 6, 10, 12, 13, 18 AND 28 ,
MATERIAL IS PRE-QUALIFIED ACC. TO ANNEX E OF EN10225

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
826178	192251/1	320	70,00	3050,0	12000	1		20.475	41442	05-03-2020	S460MLNORZ35
827474	192523/1	240	50,00	2051,0	12000	1		9.942	41442	01-03-2020	S460MLNORZ35
827474	192524/1	240	50,00	2051,0	12000	1		9.905	41442	02-03-2020	S460MLNORZ35
827475	197377/1	100	25,00	2051,0	16000	1		6.530	41442	09-03-2020	S460MLNORZ35
828193	197381/1	ITEM 50 10	15,00	2500,0	12000	1		3.617	41442	09-03-2020	S460MLNORZ35
828193	197381/2	10	15,00	2500,0	12000	1		3.617	41442	09-03-2020	S460MLNORZ35
828193	197382/1	10	15,00	2500,0	12000	1		3.597	41442	09-03-2020	S460MLNORZ35
828441	196786/1	390	50,00	3000,0	12000	1		14.444	41442	11-03-2020	S460MLNORZ35
828441	196787/1	390	50,00	3000,0	12000	1		14.521	41442	16-03-2020	S460MLNORZ35
828441	196788/1	390	50,00	3000,0	12000	1		14.526	41442	16-03-2020	S460MLNORZ35
916072	196112/1	220	40,00	3750,0	14000	1		16.730	41442	19-03-2020	S460MLNORZ35

A04
Symbol of the manufacturer's work

voestalpine

Z03
Stamp of the inspection representative

DNV-GL

Issued at **Augsburg** on 2020-04-14

for **DNV GL**
This document has been digitally signed and will therefore not have handwritten signatures.
Antonio Ramon Zambrano Colmenares

Z02
Inspection representative voestalpine Grobblech
HEIDENREICH Günter

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	ind. Weight kg	total Weight kg	A09 Disp-No 130 42	Date of Tests	reference no.
917366	191536/1	300	60,00	3050,0	12000	1		17.656	41442	24-02-2020	S460MLNORZ35
		Sum				12		135.560			

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted.
Thicknesstolerance acc. EN 10029/10 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %	Pcm %
	>=		.150				.015																
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100	.010	.43	.22
826178		.054	.166	1.520	.007	.0009	.031	.171	.510	.114	.012	.004	.029	.013	.0041	.0002	.0060	.0015	.0030	.0040	.002	.40	.16
827474		.030	.311	1.600	.005	.0005	.033	.169	.160	.013	.164	.005	.035	.012	.0053	.0002	.0030	.0012	.0020	.0020	.002	.36	.14
827475		.029	.316	1.610	.007	.0008	.039	.174	.170	.010	.161	.004	.038	.012	.0046	.0002	.0020	.0014	.0020	.0030	.002	.36	.14
828193		.027	.333	1.640	.007	.0010	.033	.187	.170	.017	.155	.003	.038	.013	.0048	.0002	.0060	.0017	.0030	.0030	.002	.36	.14
828441		.028	.310	1.590	.007	.0006	.036	.168	.170	.023	.166	.005	.034	.011	.0046	.0002	.0020	.0017	.0020	.0020	.002	.35	.14
916072		.032	.327	1.600	.007	.0009	.039	.173	.170	.019	.162	.004	.036	.012	.0036	.0002	.0070	.0026	.0020	.0020	.002	.36	.15
917366		.052	.178	1.560	.009	.0007	.022	.178	.510	.123	.015	.005	.028	.010	.0044	.0002	.0030	.0011	.0030	.0040	.002	.41	.16

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	LF01 %	LF02 %	LF03 %
Set values >=			
Set values <=	.090	.110	.900
826178	.033	.046	.807
827474	.040	.052	.506
827475	.042	.054	.515
828193	.041	.054	.529
828441	.039	.050	.527
916072	.040	.052	.524
917366	.033	.043	.826

C99 - Supplementary information
BI <= 0,01%
C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							460	550		17.0			
Set values <=							580	700			93.00		
828193	194809	30,0	15.64	F	O	T	554	621	A5	18.6	89.13		
>=							460	550		17.0			
Set values <=							580	700			90.00		
826178	192251	30,0	40.98	F	O	T	467	607	A5	21.7	77.04		
	192251	30,0	41.60	F	O	T	513	600	A5	23.2	85.54	001	1
827474	192523	Ø	9.98	F	V	T	524	594	A5	25.0	88.31		
	192525	Ø	9.96	F	V	T	482	576	A5	26.5	83.56		
	192523	Ø	9.99	F	V	T	516	592	A5	27.2	87.22	001	1
	192525	Ø	9.99	F	V	T	522	595	A5	27.6	87.66	001	1
827475	197377	30,0	25.23	F	O	T	509	577	A5	21.6	88.36		
828441	196786	Ø	9.97	F	V	T	473	568	A5	26.8	83.33		
	196788	Ø	10.05	F	V	T	463	562	A5	30.7	82.42		
	196786	Ø	10.03	F	V	T	511	580	A5	27.4	88.22	001	1
	196788	Ø	10.04	F	V	T	481	557	A5	30.1	86.42	001	1
916072	196112	30,0	40.57	F	O	T	499	596	A5	21.9	83.77		
917366	191536	30,0	41.42	F	O	T	478	605	A5	21.0	79.06		
	191536	30,0	41.40	F	O	T	514	603	A5	24.5	85.33	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width mm	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH

001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
826178	189431	CV 10x10	F	ZB2	T	-40	318	325	322	322			strain aged 5%, 60 min. at 250°C
827474	192525	CV 10x10	F	ZB2	T	-40	51	365	51	156			strain aged 5%, 60 min. at 250°C
827475	193364	CV 10x10	F	ZB2	T	-40	374	385	381	380			strain aged 5%, 60 min. at 250°C
828193	194809	CV 10x10	F	ZB2	T	-40	353	350	368	357			strain aged 5%, 60 min. at 250°C
828441	196788	CV 10x10	F	ZB2	T	-40	352	366	399	373			strain aged 5%, 60 min. at 250°C
916072	187925	CV 10x10	F	ZB2	T	-40	244	133	132	169			strain aged 5%, 60 min. at 250°C
917366	191199	CV 10x10	F	ZB2	T	-40	285	322	315	307			strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60			
826178	192251	CV 10x10	F	O	T	-40	338	327	355	340			
	192251	CV 10x10	F	O	T	-40	278	301	259	279	001	1	
	192251	CV 10x10	F	K	T	-40	329	303	353	328			
	192251	CV 10x10	F	K	T	-40	146	152	334	211	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
827474	192525	CV 10x10	F	O	T	-40	362	380	356	366			
	192525	CV 10x10	F	O	T	-40	337	305	332	325	001	1	
	192525	CV 10x10	F	K	T	-40	391	364	371	375			
	192525	CV 10x10	F	K	T	-40	310	348	343	334	001	1	
827475	197377	CV 10x10	F	O	T	-40	352	363	363	359			
828193	194809	CV 10x10	F	O	T	-40	341	347	363	350			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
828441	196786	CV 10x10	F	O	T	-40	357	356	358	357			
	196788	CV 10x10	F	O	T	-40	368	366	369	368			
	196786	CV 10x10	F	O	T	-40	297	335	336	323	001	1	
	196788	CV 10x10	F	O	T	-40	307	307	312	308	001	1	
	196786	CV 10x10	F	K	T	-40	381	375	369	375			
	196788	CV 10x10	F	K	T	-40	394	370	378	381			
	196786	CV 10x10	F	K	T	-40	343	315	313	324	001	1	
	196788	CV 10x10	F	K	T	-40	360	332	367	353	001	1	
916072	193161	CV 10x10	F	O	T	-40	360	352	367	360			
917366	191536	CV 10x10	F	O	T	-40	342	320	332	331			
	191536	CV 10x10	F	O	T	-40	291	304	313	302	001	1	
	191536	CV 10x10	F	K	T	-40	349	266	332	316			
	191536	CV 10x10	F	K	T	-40	127	125	218	157	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  K: ½ t
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
826178	189431	F	OS	HV10	270	266	261
827474	193384	F	OS	HV10	209	198	205
827475	193484	F	OS	HV10	219	223	224
828193	194809	F	OS	HV10	220	219	218
828441	196788	F	OS	HV10	206	197	193
916072	193127	F	OS	HV10	212	209	206
917366	191206	F	OS	HV10	248	251	240

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						440	440	440	25	25	25	35
Set values <=												
826178	189431	Ø	9.97	F	S	578	581	578	77	76	75	76
827474	192525	Ø	10.00	F	S	545	544	544	80	82	82	81
827475	193364	Ø	9.98	F	S	563	566	563	81	82	83	82
828193	194809	Ø	5.94	F	S	624	629	630	78	79	79	79
828441	196788	Ø	10.01	F	S	559	555	557	70	76	82	76
916072	187925	Ø	9.94	F	S	584	581	582	83	83	83	83
917366	191199	Ø	9.99	F	S	594	595	599	81	81	77	80

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=			.150				.015													
Set values <=		.150	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.040	.025	.0100	.0005	.0200	.0050	.0300	.0100
826178	192251	.053	.164	1.530	.007	.0009	.030	.174	.520	.114	.012	.004	.029	.013	.0043	.0002	.0020	.0015	.0020	.0030
827474	192524	.029	.323	1.620	.006	.0008	.037	.168	.170	.016	.162	.004	.038	.012	.0046	.0002	.0020	.0013	.0030	.0030
827475	193456	.028	.317	1.620	.007	.0008	.039	.173	.180	.010	.162	.004	.039	.013	.0047	.0002	.0020	.0013	.0030	.0020
828193	194810	.028	.334	1.630	.007	.0008	.033	.187	.170	.017	.153	.003	.038	.013	.0043	.0002	.0020	.0016	.0030	.0030
828441	196786	.028	.324	1.620	.008	.0010	.044	.175	.170	.025	.165	.005	.038	.012	.0052	.0002	.0020	.0020	.0030	.0020
	196788	.029	.331	1.630	.009	.0009	.040	.172	.180	.025	.165	.005	.037	.012	.0046	.0003	.0020	.0016	.0030	.0020
916072	187925	.032	.330	1.620	.008	.0008	.040	.176	.170	.019	.162	.004	.037	.012	.0036	.0002	.0020	.0021	.0030	.0030
917366	191212	.053	.176	1.540	.008	.0005	.020	.173	.510	.121	.015	.005	.026	.010	.0030	.0002	.0020	.0009	.0030	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Cae %	Pcm %	LF01 %	LF02 %	LF03 %
Set values >=							
Set values <=		.010	.43	.22	.090	.110	.900
826178	192251	.002	.40	.16	.033	.046	.820
827474	192524	.002	.36	.14	.042	.054	.516
827475	193456	.002	.36	.14	.043	.056	.525
828193	194810	.002	.36	.14	.041	.054	.527
828441	196786	.002	.36	.14	.043	.055	.535
	196788	.002	.36	.15	.042	.054	.542
916072	187925	.002	.36	.15	.041	.053	.527
917366	191212	.002	.40	.16	.031	.041	.819

C99 - Supplementary information
BI <= 0,01%

C99 - Supplementary information
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
LF03: Cr+Ni+Cu+Mo
LF02: Nb+V+Ti
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 240:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 300:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 320:

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Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 390:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the above-mentioned delivery corresponds to the order (and standard).

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

Reduction of area on tensile test specimens in the through-thickness direction in accordance with EN 10164:2018, class Z35.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 100, 220
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 240, 300, 320, 390
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest Masterscan 380 no. 90007347 or Sonatest Masterscan 380 no. 90006522 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 1 or 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301670

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria
Office: **Vienna**

Clients Order Number: **3501435**
Date: **14-12-2023**

Order Status: **incomplete**

Inspection Dates
First: **06-12-2023**
final: **06-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

9 piece(s) of steel plate(s) **103376 kg** , as per attached inspection Certificate no.: **A0377733**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

LRQA004 11.2021

14-DEC-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

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voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300624-2

Z02 Date 14-12-2023

A04 manufacturer's work symbol
voestalpine

A03 Document number	A0377733	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023	Date of dispatch	10-12-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate
		B02 Material	S460MLO Z35
		B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001743 122A70C	Supplementary requirements	Z35 - EN 10164
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B04 Delivery condition	thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. //
MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7,8 AND 12. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
955727	223361/1	20	40,00	3000,0	12000	1		11.467	89720	1PLATCS40052
955727	223362/1	20	40,00	3000,0	12000	1		11.455	89720	1PLATCS40052
955727	223363/1	20	40,00	3000,0	12000	1		11.497	89720	1PLATCS40052
955727	223364/1	20	40,00	3000,0	12000	1		11.489	89720	1PLATCS40052
955727	223365/1	20	40,00	3000,0	12000	1		11.490	89718	1PLATCS40052
955727	223369/1	20	40,00	3000,0	12000	1		11.496	89718	1PLATCS40052
955727	223370/1	20	40,00	3000,0	12000	1		11.492	89718	1PLATCS40052
955727	223371/1	20	40,00	3000,0	12000	1		11.496	89718	1PLATCS40052
955727	223372/1	20	40,00	3000,0	12000	1		11.494	89718	1PLATCS40052
		Sum				9		103.376		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
955727	.027	.324	1.620	.008	.0004	.043	.172	.180	.016	.162	.005	.035	.013	.0062	.0002	.0020	.0024	.0030	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
955727	.14	.040	.053	6.94

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						420	520		17.0	
Set values	<=							700			93.00
955727	223362	30,0	40.53	F	O	T	532	607	A5	22.9	87.63
	223363	30,0	40.80	F	O	T	460	588	A5	22.8	78.24
	223370	30,0	41.07	F	O	T	533	610	A5	21.9	87.42
	223371	30,0	41.14	F	O	T	481	595	A5	23.0	80.92

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
955727	223362	CV 10x10	F	O	L	-40	368	376	361	368
	223362	CV 10x10	F	O	T	-40	376	355	365	365
	223363	CV 10x10	F	O	L	-40	363	374	363	367
	223363	CV 10x10	F	O	T	-40	381	378	375	378
	223370	CV 10x10	F	O	L	-40	351	351	356	353
	223370	CV 10x10	F	O	T	-40	395	377	395	389
	223371	CV 10x10	F	O	L	-40	369	388	362	373
	223371	CV 10x10	F	O	T	-40	357	361	336	351

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
955727	223367	Ø	9.97	F	S	580	582	580	83	82	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
955727	223367	.029	.320	1.610	.008	.0004	.042	.169	.180	.016	.161	.004	.034	.013	.0062	.0002	.0020	.0022	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.42	.22	.120	.110	
955727	223367	.0020	.0020	.36	.14	.038	.051	6.77

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301669

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **07-12-2023**

Order Status: **incomplete**

Inspection Dates
First: **28-11-2023**

final: **06-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

43 piece(s) of steel plate(s) **256664 kg** , as per attached inspection Certificate no.: **A0377700**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

LRQA004 11.2021

14-DEC-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2300624-1

Z02 Date 07-12-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377700	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001743 122A70C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. // MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7 AND 8. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
756793	225067/11	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023	1PLATCS20052
756793	225068/2	80	20,00	2400,0	12000	1		4.634	89645	06-12-2023	1PLATCS20052
756793	225068/1	80	20,00	2400,0	12000	1		4.634	89650	07-12-2023	1PLATCS20052
761019	223659/1	40	30,00	2500,0	12000	1		7.142	89649	07-12-2023	1PLATCS30052
761893	223373/1	10	40,00	2500,0	12000	1		9.589	89649	07-12-2023	1PLATCS40047
761893	223374/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023	1PLATCS40047
761893	223375/1	10	40,00	2500,0	12000	1		9.587	89649	07-12-2023	1PLATCS40047
761893	223376/1	10	40,00	2500,0	12000	1		9.587	89649	07-12-2023	1PLATCS40047
761893	223377/1	10	40,00	2500,0	12000	1		9.585	89650	07-12-2023	1PLATCS40047
761893	223378/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023	1PLATCS40047
761893	223394/1	60	25,00	2400,0	8100	1		3.896	89645	06-12-2023	1PLATCS25057
761893	223394/3	60	25,00	2400,0	8100	1		3.895	89648	06-12-2023	1PLATCS25057
761893	223394/2	60	25,00	2400,0	8100	1		3.894	89645	06-12-2023	1PLATCS25057

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch reference no.
761893	223395/3	60	25,00	2400,0	8100	1		3.900	89645	06-12-2023 1PLATCS25057
761893	223395/2	60	25,00	2400,0	8100	1		3.898	89645	06-12-2023 1PLATCS25057
761893	223395/1	60	25,00	2400,0	8100	1		3.900	89645	06-12-2023 1PLATCS25057
761893	223396/1	60	25,00	2400,0	8100	1		3.901	89645	06-12-2023 1PLATCS25057
761893	223396/3	60	25,00	2400,0	8100	1		3.901	89645	06-12-2023 1PLATCS25057
761893	223397/1	50	25,00	2400,0	12000	1		5.771	89648	06-12-2023 1PLATCS25057
761893	223398/2	50	25,00	2400,0	12000	1		5.772	89649	07-12-2023 1PLATCS25057
761893	223398/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223399/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223399/2	50	25,00	2400,0	12000	1		5.773	89648	06-12-2023 1PLATCS25057
761893	223400/2	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223400/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223401/2	50	25,00	2400,0	12000	1		5.749	89649	07-12-2023 1PLATCS25057
761893	223401/1	50	25,00	2400,0	12000	1		5.748	89649	07-12-2023 1PLATCS25057
761893	223402/2	50	25,00	2400,0	12000	1		5.750	89648	06-12-2023 1PLATCS25057
761893	223402/1	50	25,00	2400,0	12000	1		5.748	89649	07-12-2023 1PLATCS25057
761894	223212/2	30	40,00	2500,0	8000	1		6.353	89592	05-12-2023 1PLATCS40047
761894	223381/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223382/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223384/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223403/2	70	25,00	2000,0	12000	1		4.794	89648	06-12-2023 1PLATCS25057
761894	223403/1	70	25,00	2000,0	12000	1		4.794	89648	06-12-2023 1PLATCS25057
761895	223413/2	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223413/1	80	20,00	2400,0	12000	1		4.636	89648	06-12-2023 1PLATCS20052
761895	223414/1	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223414/2	80	20,00	2400,0	12000	1		4.636	89649	07-12-2023 1PLATCS20052
761895	223415/2	80	20,00	2400,0	12000	1		4.632	89645	06-12-2023 1PLATCS20052
761895	223416/1	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223416/2	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
865238	225033/1	30	40,00	2500,0	8000	1		6.362	89648	06-12-2023 1PLATCS40047
	Sum					43		256.664		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
	>=						.015															
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
756793		.032	.331	1.600	.009	.0005	.032	.171	.170	.007	.163	.003	.034	.011	.0051	.0002	.0020	.0019	.0020	.0020	.0020	.36
761019		.032	.322	1.610	.006	.0011	.034	.173	.170	.006	.160	.004	.036	.012	.0060	.0002	.0020	.0027	.0020	.0020	.0020	.36
761893		.032	.317	1.640	.007	.0008	.041	.177	.170	.005	.160	.005	.036	.013	.0054	.0003	.0020	.0016	.0030	.0020	.0020	.36
761894		.026	.317	1.620	.006	.0005	.039	.175	.170	.004	.164	.004	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020	.0020	.35
761895		.028	.344	1.620	.005	.0006	.042	.175	.170	.004	.158	.005	.036	.012	.0052	.0003	.0020	.0024	.0020	.0020	.0020	.36
865238		.031	.341	1.620	.007	.0007	.038	.181	.170	.009	.159	.004	.036	.013	.0060	.0002	.0020	.0022	.0020	.0020	.0020	.36

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
756793	.14	.037	.048	6.27
761019	.14	.040	.052	5.67
761893	.15	.041	.054	7.59
761894	.14	.040	.053	7.96
761895	.14	.041	.053	8.08
865238	.15	.040	.053	6.33

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						420	520		17.0	
Set values	<=							700			93.00
761019	223659	30,0	30.33	F	O	T	538	605	A5	22.9	89.01
761893	223375	30,0	41.07	F	O	T	533	615	A5	21.8	86.79
	223378	30,0	41.09	F	O	T	507	599	A5	22.5	84.69
761894	223381	30,0	41.21	F	O	T	504	595	A5	23.7	84.65
	223383	30,0	41.14	F	O	T	502	589	A5	23.4	85.17
865238	225033	30,0	40.43	F	O	T	516	609	A5	22.9	84.68
	>=						440	520		17.0	
Set values	<=							700			93.00
756793	225068	30,0	20.59	F	O	T	537	599	A5	22.8	89.62
761893	223395	30,0	25.42	F	O	T	530	592	A5	22.4	89.60
	223396	30,0	25.50	F	O	T	555	614	A5	20.7	90.43
	223400	30,0	25.34	F	O	T	530	595	A5	23.9	89.09
	223401	30,0	25.43	F	O	T	573	625	A5	22.4	91.78
761894	223403	30,0	25.74	F	O	T	539	600	A5	24.9	89.91
761895	223413	30,0	20.64	F	O	T	516	604	A5	21.4	85.40
	223419	30,0	20.61	F	O	T	529	582	A5	22.8	90.91

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
Set values	>=					-40	42	42	42	60
	<=									
756793	225068	CV 10x10	F	O	T	-40	368	369	354	364
	225068	CV 10x10	F	O	L	-40	358	373	367	366
761019	223659	CV 10x10	F	O	T	-40	342	376	317	345
	223659	CV 10x10	F	O	L	-40	359	368	379	369
761893	223375	CV 10x10	F	O	T	-40	380	374	368	374
	223375	CV 10x10	F	O	L	-40	363	370	375	369
	223378	CV 10x10	F	O	T	-40	389	371	384	381
	223378	CV 10x10	F	O	L	-40	376	374	374	375
	223396	CV 10x10	F	O	T	-40	379	360	361	367
	223396	CV 10x10	F	O	L	-40	389	374	372	378
	223400	CV 10x10	F	O	T	-40	382	361	352	365
	223400	CV 10x10	F	O	L	-40	368	361	374	368
	223401	CV 10x10	F	O	T	-40	385	373	374	378
	223401	CV 10x10	F	O	L	-40	359	365	372	366
761894	223381	CV 10x10	F	O	T	-40	365	393	357	372
	223381	CV 10x10	F	O	L	-40	386	367	384	379
	223383	CV 10x10	F	O	T	-40	406	383	368	386
	223383	CV 10x10	F	O	L	-40	384	369	381	378
	223403	CV 10x10	F	O	T	-40	384	397	409	397
	223403	CV 10x10	F	O	L	-40	378	394	379	384
761895	223413	CV 10x10	F	O	T	-40	377	394	390	387
	223413	CV 10x10	F	O	L	-40	416	405	390	404
	223419	CV 10x10	F	O	T	-40	315	374	339	343
	223419	CV 10x10	F	O	L	-40	383	382	413	393
865238	225033	CV 10x10	F	O	T	-40	385	362	385	377
	225033	CV 10x10	F	O	L	-40	388	373	371	377

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J

O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
756793	205575	.031	.326	1.600	.009	.0007	.030	.172	.170	.006	.163	.003	.035	.011	.0049	.0002	.0020	.0016	.0020	.0020
761019	216794	.030	.323	1.610	.006	.0009	.035	.171	.170	.005	.156	.003	.035	.012	.0062	.0002	.0020	.0025	.0020	.0020
761893	223378	.029	.321	1.620	.007	.0004	.041	.172	.170	.004	.157	.004	.035	.013	.0055	.0002	.0020	.0018	.0020	.0020
761894	223380	.026	.323	1.610	.007	.0004	.041	.179	.170	.006	.158	.004	.035	.012	.0053	.0002	.0020	.0014	.0020	.0020
761895	223419	.027	.341	1.620	.006	.0004	.042	.170	.170	.004	.157	.004	.035	.012	.0051	.0002	.0020	.0025	.0020	.0020
865238	225033	.031	.341	1.610	.007	.0008	.036	.173	.170	.010	.157	.003	.036	.013	.0055	.0002	.0020	.0020	.0020	.0020

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.120	.110	
756793	205575	.0020	.0020	.36	.14	.038	.049	6.12
761019	216794	.0020	.0020	.36	.14	.038	.050	5.65
761893	223378	.0020	.0020	.36	.14	.039	.052	7.45
761894	223380	.0020	.0020	.35	.14	.039	.051	7.74
761895	223419	.0020	.0020	.35	.14	.039	.051	8.24
865238	225033	.0020	.0020	.36	.14	.039	.052	6.55

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
LRQA
Witnessed Monitored Reviewed
Name: Michael Messerer
Signature
Date:
Ref. No.:
Office: Vienna
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
GABRIELLI SPA UNIPERSONALE	1723001231	123A40C	Q012301647

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

gabrielli
steel service centre

Gabrielli S.p.A. - Società Unipersonale
Sede legale e amministrativa: Via Mazzini, 58
35013 Cittadella (PD) Italy - C.P. n. 52/B
Tel. +39.049.9414611 - Fax +39.049.9414664
Deposito Marghera: Via dei Sali, 3 - 30175 Marghera (VE)

Cap. Soc. Euro 20.000.000,00 I. V.
Reg. Impr. PD 00362740284 - R.E.A. PD120850 M
PD005320 - **C.F. e P. IVA: IT 00362740284**
e-mail: info.gab@gabrielli.it
www.gabrielli.it

GRUPPO gabrielli
STEEL SERVICE NETWORK

Covolo di Pederobba, 06/12/2023

(54110)
Spett.le Ditta
ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA
RA

Oggetto: Certificati

Con la presente Vi trasmettiamo in allegato copie conformi agli originali dei certificati e/o eventuali attestati di conformità inerenti i documenti di trasporto di seguito elencati:

DDT: 23005413 del 05/12/2023

Direzione e coordinamento SO.FI.D.A. S.p.A.

Distinti Saluti

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi

Divisione Coils
35013 Cittadella (PD) Italy - Via Mazzini, 58
Tel. +39.049.9414781
Comparto Bassarena: Via Bassarena, 8/C
e-mail: info.dco@gabrielli.it

Divisione Lamiere Grosse
35013 Cittadella (PD) Italy
Via dell'Industria, 38 - Z.I.
Tel. +39.049.9415511
e-mail: info.dlg@gabrielli.it

Divisione Lunghi
35015 Galliera Veneta (PD) Italy - Via Leonardo da Vinci, 25 - Tel. +39.049.5968844
31040 Covolo di Pederobba (TV) Italy - Via Guizza, 25 - Tel. +39.0423.680411
36040 Grumolo delle Abbadesse (VI) Italy - Via Nazionale, 82 - Tel. +39.0444.580680
e-mail: info.dpl@gabrielli.it

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo / Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
1 TRAVE IPE 180 S355J2 EN10025-2										
02300089800073	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900030	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900026	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000074	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700024	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800081	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900069	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700025	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800076	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700030	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800077	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800065	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000070	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000026	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000060	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700020	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000041	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000016	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089800059	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000069	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000073	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900014	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000050	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700029	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700023	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800060	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700027	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700021	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000040	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800063	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900018	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000066	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000061	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000021	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000022	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700017	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900017	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000031	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900060	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000051	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700015	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga Matricola	Articolo Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900061	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900063	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000035	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000020	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000036	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800080	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900045	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900072	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900019	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000045	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900064	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900071	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000065	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089700016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000025	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900036	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900051	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000019	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700013	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700026	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000030	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900035	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900055	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900067	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800070	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900040	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800071	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000055	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800082	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
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C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900068	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000063	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800066	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900021	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700014	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800078	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000056	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900070	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800079	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900025	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800062	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000072	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000067	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000018	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800064	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000064	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800069	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700018	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo

Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900050	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800072	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900020	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900013	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000014	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000068	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000017	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700019	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900065	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900046	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000046	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900031	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800075	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900056	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000071	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900066	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089800061	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700028	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800074	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800068	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000013	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800083	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900041	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800067	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 1485/5-2023
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	69287	IPE 180	EN 10365	18.100 mm	78	26.615 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
69287	0,09	0,19	1,42	0,018	0,015	0,012	0,017	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
69287	0,25	0,11	0,03	0,017	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
69287	383	549	27,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
69287	KV 450/7.5	L	-20 °C	14 / 20	97	113	130	113

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51575 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1485/5-2023**
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA2302550 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE 2333/3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

.....
Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

2384/3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
METINVEST TRAMETAL SPA	1723000958	123A40D	Q012301272

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 01.09.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

CERTIFICATO DI CONTROLLO 3.2 / INSPECTION CERTIFICATE 3.2 - EN 10204:2004

METINVEST
METINVEST TRAMETAL SPA

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N° = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A06 Cliente / Customer

ROSETTI MARINO SPA
Via trieste 230
48122 RAVENNA RA
IT

A03 N° Certificato / Certificate no.	A02 Data / Date
51753	01/09/2023
A08 N° Ordine Trametal / Works order	A07 N° Ordine cliente / Customer's order
32303190	1723000958 12
DDT	del / date
Pratica / File no.	2023/TS/862/01
del / date	30/08/2023

B06 Marcatura di prodotto / Marking of the product
LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355NL
Normativa / Specification	EN10025-3:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	VELOCITA' RISCALDO C/h HEATING RATE	TEMPERATURA TRATTAMENTO °C TEMPERATURE TREATMENT	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	TEMPERATURA FINE °C END TEMPERATURE	N° CICLI / CYCLES	C00 CAMPIONE SAMPLE Q+T	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	HOLDING TIME PERMANENZA (Q) Min COOLING RAFFREDDAMENTO	TEMPERATURA (T) °C TEMPERATURE	HOLDING TIME PERMANENZA (T) Min COOLING RAFFREDDAMENTO
1	6NAC680104A	1882093	40.00X3000X4650	4,38	768337	BO	N	[W3739]														
1	6NAC680702A	1881504	40.00X3000X4650	4,38	768337	BO	N	[W3739]														
1	6NAC680702B	1881504	40.00X3000X4650	4,38	768337	BO	N	[W3739]														
1	6NAC680802A	1881507	40.00X3000X4650	4,38	768337	BO	N	W3739														
1	6NAC680802B	1881507	40.00X3000X4650	4,38	768337	BO	N	W3739														
1	6NAC690501A	1881626	40.00X3000X4650	4,38	768343	BO	N	[W3743]														
1	6NAC690501B	1881626	40.00X3000X4650	4,38	768343	BO	N	[W3743]														
1	6NAC690701A	1881499	40.00X3000X4650	4,38	768343	BO	N	W3743														
1	6NAC690701B	1881499	40.00X3000X4650	4,38	768343	BO	N	W3743														
1	6NAC690702A	1881494	40.00X3000X4650	4,38	768343	BO	N	[W3743]														
1	6NAC690702B	1881494	40.00X3000X4650	4,38	768343	BO	N	[W3743]														
1	SNAB770201A	1881515	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770201B	1881515	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770202A	1881521	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770202B	1881521	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770203A	1881518	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770203B	1881518	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770301A	1881556	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770301B	1881556	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770303A	1881551	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB770303B	1881551	40.00X3000X4650	4,38	767645	BO	N	[W3737]														
1	SNAB860201A	1881527	40.00X3000X4650	4,38	768340	BO	N	W3740														
1	SNAB860201B	1881527	40.00X3000X4650	4,38	768340	BO	N	W3740														
1	SNAB860202A	1881524	40.00X3000X4650	4,38	768340	BO	N	[W3740]														

B07	B07	B07	B09/B11	B12	B07	C70	B04	C00	B05	C00	B05 PWHT								C00	B05 Q+T						
ITEM	LAMIERA PLATE	N° INFORN. INTERNAL NUMBER	DIMENSIONI [mm] DIMENSIONS	MASSA TEORICA [t] THEORICAL WEIGHT	LOTTO BATCH NO.	STEELMAKING PROCESS PROCESSO ELAB. (A)	DELIVERY CONDITION STATO FORNITURA LAMIERA (B)	CAMPIONE SAMPLE	HEAT TREATMENT TRATT. CAMPIONE (C)	CAMPIONE PWHT SAMPLE	BEGINNING TEMPERATURE TEMPERATURA INIZIO °C	HEATING RATE VELOCITA' RISCALDO C/h	TEMPERATURE TREATMENT TEMPERATURA TRATTAMENTO °C	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	END TEMPERATURE TEMPERATURA FINE °C	N° CICLI / CYCLES	CAMPIONE Q+T SAMPLE	TEMPERATURE TEMPERATURA (Q) °C	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURE TEMPERATURA (T) °C	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
1	SNAB860202B	1881524	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB860203A	1881530	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB860203B	1881530	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB890502A	1881425	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890502B	1881425	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890503A	1881430	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890503B	1881430	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB920201A	1881539	40.00X3000X4650	4,38	768341	BO	N	W3741																	
1	SNAB920201B	1881539	40.00X3000X4650	4,38	768341	BO	N	W3741																	
1	SNAB920202A	1881544	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920202B	1881544	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920203A	1881547	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920203B	1881547	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAC290501A	1881412	40.00X3000X4650	4,38	767656	BO	N	W3738																	
1	SNAC290501B	1881412	40.00X3000X4650	4,38	767656	BO	N	W3738																	
1	SNAC290502A	1881416	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290502B	1881416	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290503A	1881408	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290503B	1881408	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
2	6NAC680703A	1882952	60.00X3000X4750	6,71	768342	BO	N	[W3742]																	
2	6NAC680704A	1882783	60.00X3000X4750	6,71	768342	BO	N	[W3742]																	
2	6NAC690502A	1882954	60.00X3000X4750	6,71	768344	BO	N	W3744																	
	Total	46		208,47																					

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
S355NL Min 0.00 - 63.00		0,90								0,020											
S355NL Max 0.00 - 63.00	0,18	1,65	0,50	0,025	0,020	0,550	0,500	0,300	0,100		0,120	0,050	0,050			0,0150				0,43	
6NAC68	0,16	1,47	0,17	0,009	0,002	0,010	0,010	0,020	<0.005	0,043	0,001	0,026	0,001	<0.005	0,0000	0,0036	0,0002	0,0003	0,41	0,41	0,24
6NAC69	0,16	1,49	0,18	0,013	0,002	0,010	0,010	0,030	<0.005	0,037	0,001	0,024	0,001	<0.005	0,0000	0,0039	0,0002	0,0003	0,41	0,42	0,24
SNAB77	0,16	1,45	0,19	0,011	0,002	0,010	0,020	0,030	<0.005	0,038	0,001	0,025	0,001	<0.005	0,0000	0,0041	0,0001	0,0000	0,40	0,41	0,24
SNAB86	0,17	1,43	0,23	0,008	0,001	0,010	0,010	0,020	<0.005	0,030	0,001	0,028	0,002	<0.005	0,0000	0,0034	0,0001	0,0000	0,41	0,41	0,25
SNAB89	0,17	1,46	0,19	0,013	0,002	0,010	0,020	0,030	<0.005	0,039	0,001	0,026	0,002	<0.005	0,0000	0,0046	0,0001	0,0000	0,41	0,42	0,25
SNAB92	0,17	1,44	0,19	0,011	0,003	0,010	0,010	0,020	<0.005	0,028	0,001	0,027	0,001	<0.005	0,0000	0,0044	0,0004	0,0000	0,41	0,42	0,25
SNAC29	0,16	1,44	0,19	0,009	0,002	0,010	0,010	0,020	<0.005	0,040	0,001	0,024	0,001	<0.005	0,0000	0,0038	0,0001	0,0000	0,40	0,41	0,24

			PROVA DI TRAZIONE TENSILE TEST								PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12	C13	C14	C10	C41	C02	C03	C01	C42		C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	ReH [Mpa] YIELD STRENGTH	Rm [Mpa] TENSILE STRENGTH	ReH/Rm	A% ELONGATION	Rp 0.2 [Mpa] PROOF/YIELD STRENGTH	LARGHEZZA [mm] WIDTH	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDRINO [mm] MANDREL	ANGOLO [°] ANGLE	ESITO (9) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
ORDINE Min 1					-40								-40		50	@										
ORDINE Min 2					-60								-60		60	@										

			PROVA DI TRAZIONE TENSILE TEST									PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	YIELD STRENGTH ReH [Mpa]	TENSILE STRENGTH Rm [Mpa]	ReH/Rm	A% ELONGATION	PROOF/YIELD STRENGTH Rp 0,2 [Mpa]	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA [mm] WIDTH	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDRINO [mm] MANDREL	ANGOLO [°] ANGLE	ESITO (5) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
S355NL Min 16.10 - 40.00					20	345	470		22,0																		
S355NL Max 16.10 - 40.00					20		630																				
S355NL Min 40.10 - 63.00					20	335	470		22,0																		
S355NL Max 40.10 - 63.00					20		630																				
S355NL Min 6.00 - 999.00													L	-50			27										
W3736	40,00	2	P	T	20	393	534	0,74	32,0		P	10,00	L	-40	D	134 186 174	165										
W3737	40,00	2	P	T	20	378	522	0,73	32,5		P	10,00	L	-40	D	235 209 196	213										
W3742	60,00	2	P	T	20	338	499	0,68	28,4		P	10,00	L	-40	D	174 102 180	152										
W3738	40,00	2	P	T	20	388	518	0,75	30,6		P	10,00	L	-40	D	206 200 194	200										
W3739	40,00	2	P	T	20	389	510	0,76	32,4		P	10,00	L	-40	D	178 194 194	189										
W3740	40,00	2	P	T	20	398	524	0,76	29,7		P	10,00	L	-40	D	198 214 196	203										
W3741	40,00	2	P	T	20	407	529	0,77	31,5		P	10,00	L	-40	D	194 193 208	198										
W3743	40,00	2	P	T	20	394	518	0,76	34,6		P	10,00	L	-40	D	206 205 168	193										
W3744	60,00	2	P	T	20	363	505	0,72	33,0		P	10,00	L	-40	D	201 189 186	192										

C10
UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

D02-D50 CONTROLLO ULTRASONORO / ULTRASONIC EXAMINATION

D02		D03		D04		D05		D06		D07
APPARECCHIATURA EQUIPMENT		N° SERIE SERIAL NO		CONDIZIONI SUPERFICIALI SURFACE CONDITIONS		ACCOPPIANTE COUPLANT		MODALITÀ OPERATIVE PROCEDURE		TARATURA CALIBRATION
GILARDONI RDG2000		RDG2000-053188003		GREZZO DI LAMINAZIONE AS ROLLED		ACQUA WATER		IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION		IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION
B07	D08	D09	D10	D11	D12	D13	D14	D15	D16	D17
LAMIERA PLATE	SONDE PROBE	DIAMETRO DIAMETER MM	FREQUENZA FREQUENCE MHZ	ANGOLO Angle °	NORMA DI RIFERIMENTO STANDARD SPECIFICATION	CLASSE DI ACCETTABILITÀ ACCEPTANCE SPECIFICATIONS	ESITO RESULT	INDICAZIONI INDICATIONS	RETICOLO RETICLE	BORDI EDGES
SNAB890502A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890502B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890503A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890503B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770301A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770301B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770303A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770303B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290501A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290501B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290502A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290502B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290503A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290503B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC680104A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50

6NAC680702A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680702B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680802A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680802B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680703A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75
6NAC680704A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75
6NAC690501A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690501B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690701A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690701B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690702A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690702B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690502A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75

D18	D19	D20
NOTE **REMARKS**	**ENTE ISPETTIVO** **INSPECTOR**	**FIRMA** **SIGNATURE**
		METINVEST TRAMETAL S.p.a **F. Andrian** **III Liv. EN ISO 9712**

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
1		EN 10029 CL.B	EN 10029	EN 10029	EN 10163/2 CL B3	EN 10029 CL. N
2		EN 10029 CL.B	EN 10029	EN 10029	EN 10163/2 CL B3	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE **STAMP OF THE INSPECTION REPRESENTATIVE** RINA Telesforo Erik Marine Surveyor RINA Services S.p.A. 1926	**METINVEST TRAMETAL S.p.a** **F. Andrian** **CQ Manager**

METINVEST
METINVEST TRAMETAL SPA

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trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-3

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-3

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355N	EN10025-3:2019
S355NL	EN10025-3:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355NL	6NAC680104A	1882093	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680702A	1881504	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680702B	1881504	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680703A	1882952	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680704A	1882783	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680802A	1881507	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680802B	1881507	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690501A	1881626	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690501B	1881626	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690502A	1882954	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690701A	1881499	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690701B	1881499	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690702A	1881494	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690702B	1881494	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770201A	1881515	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770201B	1881515	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770202A	1881521	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770202B	1881521	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770203A	1881518	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770203B	1881518	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770301A	1881556	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770301B	1881556	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770303A	1881551	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770303B	1881551	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860201A	1881527	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860201B	1881527	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860202A	1881524	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860202B	1881524	EN10025-1:2004

Lamiera/ Plate	S355NL	SNAB860203A	1881530	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860203B	1881530	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890502A	1881425	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890502B	1881425	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890503A	1881430	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890503B	1881430	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920201A	1881539	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920201B	1881539	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920202A	1881544	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920202B	1881544	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920203A	1881547	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920203B	1881547	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290501A	1881412	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290501B	1881412	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290502A	1881416	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290502B	1881416	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290503A	1881408	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290503B	1881408	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

The products specified in this document are intended to be used in welded structures, bolted and riveted.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	**Prestazione / Performance**	**Norma Armonizzata / Harmonized specification**
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

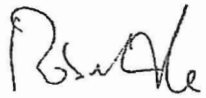
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

01/09/2023

Roberto Re



Managing Director
Metinvest Trametal spa
Metinvest Group

Metinvest Trametal SpA • Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V.
Registered office: Via XII Ottobre, 3 • 16121 Genova, Italy • Phone +39 010 5762911 • Fax +39 010 5762990
Works: Via E. Fermi, 44 • 33058 San Giorgio di Nogaro UD, Italy • Phone +39 0431 629989 • Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v. • C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 • REA 437720/GE
http://trametal.metinvestholding.com

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301763

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 29.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 5**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **24-01-2024**

Order Status: **incomplete**

Inspection Dates
First: **06-12-2023**

final: **06-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

1 piece(s) of steel plate(s) **11490 kg** , as per attached inspection Certificate no.: **A0377959**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

26-JAN-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2300624-5

Z02 Date 24-01-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377959	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023

Date of dispatch 18-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1723001743 122A70C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. // MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7,8 AND 12. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
955727	223366/1	20	40,00	3000,0	12000	1		11.490	40668	1PLATCS40052
		Sum				**1**		**11.490**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
955727	.027	.324	1.620	.008	.0004	.043	.172	.180	.016	.162	.005	.035	.013	.0062	.0002	.0020	.0024	.0030	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
955727	.14	.040	.053	6.94

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							420	520		17.0	
Set values <=								700			93.00
955727	223370	30,0	41.07	F	O	T	533	610	A5	21.9	87.42

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>= Set values <=						-40	42	42	42	60
955727	223370	CV 10x10	F	O	L	-40	351	351	356	353
	223370	CV 10x10	F	O	T	-40	395	377	395	389

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
955727	223367	Ø	9.97	F	S	580	582	580	83	82	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
955727	223367	.029	.320	1.610	.008	.0004	.042	.169	.180	.016	.161	.004	.034	.013	.0062	.0002	.0020	.0022	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
Set values >=								2.00
Set values <=		.0100	.0100	.42	.22	.120	.110	
955727	223367	.0020	.0020	.36	.14	.038	.051	6.77

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

26-JAN-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature
LRQA004 11.2021

26-JAN-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301766

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

30.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 6**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **30-01-2024**

Order Status: **incomplete**

Inspection Dates
First: **07-12-2023**

final: **07-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

2 piece(s) of steel plate(s) **12299 kg** , as per attached inspection Certificate no.: **A0378077**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

30-JAN-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2300624-6

Z02 Date 30-01-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378077	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023	Date of dispatch	28-01-2024 400F

A06 Customer: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.: 1723001743 122A70C

A06 Consignee: Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product: Plate

B02 Material: S460MLO

B03 Standard: EN 10225-1 : 2019

B04 Delivery condition: thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. //
MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7 AND 8. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
761895	223215/1	30	40,00	2471,0	7894	1		6.171	40996	1PLATCS40047
761895	223217/1	30	40,00	2449,0	7910	1		6.128	40996	1PLATCS40047
		Sum				2		12.299		

B14 - Supplementary information

multiple deviation for plate(s) 223215/1, 223217/1: Customer accepted the deviation.

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Signature
Ref. No
Office: Vienna

30-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
761895	.028	.344	1.620	.005	.0006	.042	.175	.170	.004	.158	.005	.036	.012	.0052	.0003	.0020	.0024	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
761895	.14	.041	.053	8.08

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

30-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							420	520		17.0	
Set values <=								700			93.00
761895	223214	30,0	40.45	F	O	T	499	594	A5	22.6	84.09
	223217	30,0	40.45	F	O	T	488	590	A5	23.7	82.67

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

30-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
761895	223214	CV 10x10	F	O	T	-40	362	369	377	369
	223214	CV 10x10	F	O	L	-40	365	355	370	363
	223217	CV 10x10	F	O	T	-40	386	382	390	386
	223217	CV 10x10	F	O	L	-40	379	390	383	384

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
761895	223419	.027	.341	1.620	.006	.0004	.042	.170	.170	.004	.157	.004	.035	.012	.0051	.0002	.0020	.0025	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

30-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.120	.110	
761895	223419	.0020	.0020	.35	.14	.039	.051	8.24

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

30-JAN-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

30-JAN-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301788

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

07.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 7**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **01-02-2024**

Order Status: **incomplete**

Inspection Dates
First: **07-12-2023**

final: **12-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

9 piece(s) of steel plate(s) **55214 kg** , as per attached inspection Certificate no.: **A0378141**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[x] Witnessed [ ] Monitored [x] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

06-FEB-2024

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300624-7

Z02 Date 01-02-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0378141	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023

400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001743 122A70C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. // MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7 AND 8. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
761894	223212/1	30	40,00	2455,0	7889	1		6.112	41161	31-01-2024	1PLATCS40047
761894	223213/2	30	40,00	2407,0	7943	1		6.033	41161	31-01-2024	1PLATCS40047
761894	223213/1	30	40,00	2463,0	7894	1		6.136	41212	01-02-2024	1PLATCS40047
761895	223214/2	30	40,00	2468,0	7946	1		6.204	41161	31-01-2024	1PLATCS40047
761895	223214/1	30	40,00	2472,0	7916	1		6.191	41212	01-02-2024	1PLATCS40047
761895	223215/2	30	40,00	2455,0	7922	1		6.153	41149	31-01-2024	1PLATCS40047
761895	223216/2	30	40,00	2451,0	7888	1		6.116	41212	01-02-2024	1PLATCS40047
761895	223216/1	30	40,00	2462,0	7883	1		6.140	41161	31-01-2024	1PLATCS40047
761895	223217/2	30	40,00	2458,0	7882	1		6.129	41212	01-02-2024	1PLATCS40047
	Sum					9		55.214			

B14 - Supplementary information

multiple deviation for plate(s) 223212/1, 223213/1, 223213/2, 223214/1, 223214/2, 223215/2, 223216/1, 223216/2, 223217/2: Customer accepted

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.

the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
761894	.026	.317	1.620	.006	.0005	.039	.175	.170	.004	.164	.004	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020	.0020	.35
761895	.028	.344	1.620	.005	.0006	.042	.175	.170	.004	.158	.005	.036	.012	.0052	.0003	.0020	.0024	.0020	.0020	.0020	.36

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature
LRQA084 11.2021

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
761894	.14	.040	.053	7.96
761895	.14	.041	.053	8.08

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							420	520		17.0	
Set values <=								700			93.00
761894	223381	30,0	41.21	F	O	T	504	595	A5	23.7	84.65
761895	223214	30,0	40.45	F	O	T	499	594	A5	22.6	84.09
	223217	30,0	40.45	F	O	T	488	590	A5	23.7	82.67

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
761894	223213	CV 10x10	F	O	T	-40	355	345	365	355
	223213	CV 10x10	F	O	L	-40	344	357	360	353
	223381	CV 10x10	F	O	T	-40	365	393	357	372
	223381	CV 10x10	F	O	L	-40	386	367	384	379
761895	223214	CV 10x10	F	O	T	-40	362	369	377	369
	223214	CV 10x10	F	O	L	-40	365	355	370	363
	223217	CV 10x10	F	O	T	-40	386	382	390	386
	223217	CV 10x10	F	O	L	-40	379	390	383	384

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
761894	223380	.026	.323	1.610	.007	.0004	.041	.179	.170	.006	.158	.004	.035	.012	.0053	.0002	.0020	.0014	.0020	.0020
761895	223419	.027	.341	1.620	.006	.0004	.042	.170	.170	.004	.157	.004	.035	.012	.0051	.0002	.0020	.0025	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.120	.110	
761894	223380	.0020	.0020	.35	.14	.039	.051	7.74
761895	223419	.0020	.0020	.35	.14	.039	.051	8.24

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature
LRQA

06-FEB-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301789

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

07.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 8**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **01-02-2024**

Order Status: **complete**

Inspection Dates
First: **07-12-2023**

final: **07-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

1 piece(s) of steel plate(s) **11310 kg** , as per attached inspection Certificate no.: **A0378142**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[x] Witnessed [ ] Monitored [x] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

06-FEB-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300624-8 K

Z02 Date 01-02-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378142**	**A08 Order-No.:**	**3501435**	**A07 OrderDat.**	19-10-2023	**Date of dispatch**	31-01-2024 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	**B01 Product**	Plate		
		B02 Material	S460MLO Z35	**B03 Standard**	EN 10225-1 : 2019
A07 OrderNo.	1723001743 122A70C	**Supplementary requirements**	Z35 - EN 10164		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	**B04 Delivery condition**	thermomechanical rolled + accelerated cooled		

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. //
MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7,8 AND 12. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
760406	226571/1	20	40,00	2978,0	11946	1		11.310	41150	1PLATCS40052
	Sum					1		11.310		

B14 - Supplementary information

multiple deviation for plate(s) 226571/1: Customer accepted the deviation.

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No :
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
760406	.039	.357	1.620	.006	.0013	.038	.175	.170	.007	.169	.006	.037	.013	.0060	.0003	.0020	.0019	.0020	.0020	.0020	.37

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
760406	.15	.043	.056	6.33

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							420	520		17.0	
Set values <=								700			93.00
760406	209110	30,0	40.66	F	O	T	548	643	A5	20.9	85.24

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
760406	209110	CV 10x10	F	O	T	-40	330	345	353	342
	226571	CV 10x10	F	O	L	-40	339	360	348	349

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
760406	209104	Ø	10.01	F	S	605	608	606	81	80	81	81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
760406	209108	.039	.363	1.620	.007	.0011	.038	.173	.170	.007	.165	.005	.036	.013	.0052	.0002	.0020	.0023	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.120	.110	
760406	209108	.0020	.0020	.37	.15	.041	.054	7.31

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

06-FEB-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301727

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **16.01.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **10-01-2024**

Order Status: **incomplete**

Inspection Dates
First: **06-12-2023**

final: **06-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

3 piece(s) of steel plate(s) **34464 kg** , as per attached inspection Certificate no.: **A0377881**

Specification

S460MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2
AUT2300624-4

Z02 Date 10-01-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377881	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023	Date of dispatch	04-01-2024	400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo.
1723001743 122A70C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO Z35

B03 Standard EN 10225-1 : 2019

Supplementary requirements Z35 - EN 10164

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. //
MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7,8 AND 12. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
955727	223367/1	20	40,00	3000,0	12000	1		11.500	40192	1PLATCS40052
955727	223368/1	20	40,00	3000,0	12000	1		11.497	40192	1PLATCS40052
955727	223393/1	20	40,00	3000,0	12000	1		11.467	40192	1PLATCS40052
		Sum				**3**		**34.464**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA
LRQA/AH 11.2021

15-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
955727	.027	.324	1.620	.008	.0004	.043	.172	.180	.016	.162	.005	.035	.013	.0062	.0002	.0020	.0024	.0030	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
955727	.14	.040	.053	6.94

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							420	520		17.0	
Set values <=								700			93.00
955727	223367	30,0	41.21	F	O	T	477	596	A5	23.8	80.07

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
>=						-40	42	42	42	60
Set values <=										
955727	223367	CV 10x10	F	O	L	-40	360	382	374	372
	223367	CV 10x10	F	O	T	-40	400	385	379	388

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
955727	223367	Ø	9.97	F	S	580	582	580	83	82	83	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
955727	223367	.029	.320	1.610	.008	.0004	.042	.169	.180	.016	.161	.004	.034	.013	.0062	.0002	.0020	.0022	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
Set values >=								2.00
Set values <=		.0100	.0100	.42	.22	.120	.110	
955727	223367	.0020	.0020	.36	.14	.038	.051	6.77

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

15-JAN-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301714

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

08.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria
Office: **Vienna**

Clients Order Number: **3501435**
Date: **20-12-2023**

Order Status: **incomplete**

Inspection Dates
First: **28-11-2023**
final: **15-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

40 piece(s) of steel plate(s) **225887 kg** , as per attached inspection Certificate no.: **A0377760**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-JAN-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2300624-3

Z02 Date 20-12-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0377760**	**A08 Order-No.:**	**3501435**	**A07 OrderDat.** 19-10-2023	400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A07 OrderNo. 1723001743 122A70C

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S460MLO

B03 Standard EN 10225-1 : 2019

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. // MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7 AND 8. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Dimensions Item	B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
756793	225067/21	80	20,00	2400,0	12000	1		4.637	89927	18-12-2023	1PLATCS20052
761019	223660/1	40	30,00	2500,0	12000	1		7.146	89868	15-12-2023	1PLATCS30052
761019	223661/1	40	30,00	2500,0	12000	1		7.145	89879	15-12-2023	1PLATCS30052
761019	223662/1	40	30,00	2500,0	12000	1		7.146	89868	15-12-2023	1PLATCS30052
761019	223663/1	40	30,00	2500,0	12000	1		7.144	89868	15-12-2023	1PLATCS30052
761019	223664/1	40	30,00	2500,0	12000	1		7.148	89868	15-12-2023	1PLATCS30052
761893	223396/2	60	25,00	2400,0	8100	1		3.900	89862	15-12-2023	1PLATCS25057
761893	223397/2	50	25,00	2400,0	12000	1		5.772	89967	19-12-2023	1PLATCS25057
761894	223379/1	10	40,00	2500,0	12000	1		9.585	89863	15-12-2023	1PLATCS40047
761894	223380/1	10	40,00	2500,0	12000	1		9.587	89862	15-12-2023	1PLATCS40047
761894	223383/1	10	40,00	2500,0	12000	1		9.587	89862	15-12-2023	1PLATCS40047
761894	223385/1	10	40,00	2500,0	12000	1		9.584	89863	15-12-2023	1PLATCS40047
761894	223386/1	10	40,00	2500,0	12000	1		9.590	89863	15-12-2023	1PLATCS40047

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
761894	223387/1	10	40,00	2500,0	12000	1		9.584	89862	15-12-2023	1PLATCS40047
761894	223388/1	10	40,00	2500,0	12000	1		9.587	89862	15-12-2023	1PLATCS40047
761894	223389/1	10	40,00	2500,0	12000	1		9.586	89863	15-12-2023	1PLATCS40047
761894	223390/1	10	40,00	2500,0	12000	1		9.591	89862	15-12-2023	1PLATCS40047
761894	223391/1	10	40,00	2500,0	12000	1		9.566	89863	15-12-2023	1PLATCS40047
761894	223392/1	10	40,00	2500,0	12000	1		9.542	89863	15-12-2023	1PLATCS40047
761895	223415/1	80	20,00	2400,0	12000	1		4.632	89862	15-12-2023	1PLATCS20052
761895	223417/1	80	20,00	2400,0	12000	1		4.636	89879	15-12-2023	1PLATCS20052
761895	223417/2	80	20,00	2400,0	12000	1		4.636	89927	18-12-2023	1PLATCS20052
761895	223418/2	90	20,00	2400,0	10000	1		3.828	89912	18-12-2023	1PLATCS20052
761895	223418/1	90	20,00	2400,0	10000	1		3.826	89879	15-12-2023	1PLATCS20052
761895	223419/2	90	20,00	2400,0	10000	1		3.826	89912	18-12-2023	1PLATCS20052
761895	223419/1	90	20,00	2400,0	10000	1		3.825	89915	18-12-2023	1PLATCS20052
761895	225040/1	90	20,00	2400,0	10000	1		3.826	89912	18-12-2023	1PLATCS20052
952378	223325/2	100	15,00	2000,0	12000	1		2.879	89868	15-12-2023	1PLATCS15040
952378	223325/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223327/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223327/2	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223329/2	100	15,00	2000,0	12000	1		2.879	89868	15-12-2023	1PLATCS15040
952378	223329/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223331/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223331/2	100	15,00	2000,0	12000	1		2.880	89879	15-12-2023	1PLATCS15040
952378	223333/2	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223333/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223335/1	100	15,00	2000,0	12000	1		2.880	89868	15-12-2023	1PLATCS15040
952378	223335/2	100	15,00	2000,0	11970	1		2.868	89912	18-12-2023	1PLATCS15040
952379	227749/1	100	15,00	2000,0	12000	1		2.879	89927	18-12-2023	1PLATCS15040
	Sum					40		225.887			

B14 - Supplementary information

length-deviation for plate(s) 223335/2: Customer accepted the deviation.

B14 - Supplementary information

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LROA
LROA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
756793	.032	.331	1.600	.009	.0005	.032	.171	.170	.007	.163	.003	.034	.011	.0051	.0002	.0020	.0019	.0020	.0020	.0020	.36
761019	.032	.322	1.610	.006	.0011	.034	.173	.170	.006	.160	.004	.036	.012	.0060	.0002	.0020	.0027	.0020	.0020	.0020	.36
761893	.032	.317	1.640	.007	.0008	.041	.177	.170	.005	.160	.005	.036	.013	.0054	.0003	.0020	.0016	.0030	.0020	.0020	.36
761894	.026	.317	1.620	.006	.0005	.039	.175	.170	.004	.164	.004	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020	.0020	.36
761895	.028	.344	1.620	.005	.0006	.042	.175	.170	.004	.158	.005	.036	.012	.0052	.0003	.0020	.0024	.0020	.0020	.0020	.35
952378	.031	.333	1.620	.005	.0012	.037	.178	.170	.006	.157	.004	.035	.011	.0063	.0002	.0020	.0020	.0020	.0020	.0020	.36
952379	.032	.321	1.620	.006	.0007	.042	.177	.170	.006	.157	.004	.035	.012	.0062	.0002	.0020	.0017	.0030	.0020	.0020	.36

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
756793	.14	.037	.048	6.27
761019	.14	.040	.052	5.67
761893	.15	.041	.054	7.59
761894	.14	.040	.053	7.96
761895	.14	.041	.053	8.08
952378	.14	.039	.050	5.87
952379	.15	.039	.051	6.77

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						420	520		17.0	
Set values	<=							700			93.00
761019	223659	30,0	30.33	F	O	T	538	605	A5	22.9	89.01
	223661	30,0	30.41	F	O	T	533	597	A5	22.7	89.34
761894	223380	30,0	41.20	F	O	T	508	599	A5	22.9	84.83
	223383	30,0	41.14	F	O	T	502	589	A5	23.4	85.17
	223385	30,0	41.23	F	O	T	502	589	A5	24.3	85.27
	223390	30,0	41.25	F	O	T	500	590	A5	23.8	84.64
	223391	30,0	41.02	F	O	T	513	595	A5	22.6	86.32
	>=						440	520		17.0	
Set values	<=							700			93.00
756793	225068	30,0	20.59	F	O	T	537	599	A5	22.8	89.62
761893	223396	30,0	25.50	F	O	T	555	614	A5	20.7	90.43
	223400	30,0	25.34	F	O	T	530	595	A5	23.9	89.09
761895	223413	30,0	20.64	F	O	T	516	604	A5	21.4	85.40
	223418	30,0	20.65	F	O	T	535	595	A5	20.5	89.93
	223419	30,0	20.61	F	O	T	529	582	A5	22.8	90.91
	>=						460	520		17.0	
Set values	<=							700			93.00
952378	223333	30,0	15.34	F	O	T	513	587	A5	21.1	87.39
952379	227749	30,0	14.86	F	O	T	502	628	A5	20.2	79.88

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width MM	SpThickn	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %

C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
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Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
	>=					-40	42	42	42	60
Set values	<=									
756793	225068	CV 10x10	F	O	T	-40	368	369	354	364
	225068	CV 10x10	F	O	L	-40	358	373	367	366
761019	223659	CV 10x10	F	O	T	-40	342	376	317	345
	223659	CV 10x10	F	O	L	-40	359	368	379	369
	223661	CV 10x10	F	O	T	-40	378	359	376	371
	223661	CV 10x10	F	O	L	-40	362	355	389	369
761893	223396	CV 10x10	F	O	T	-40	379	360	361	367
	223396	CV 10x10	F	O	L	-40	389	374	372	378
	223400	CV 10x10	F	O	T	-40	382	361	352	365
	223400	CV 10x10	F	O	L	-40	368	361	374	368
761894	223380	CV 10x10	F	O	T	-40	390	393	380	388
	223380	CV 10x10	F	O	L	-40	378	371	377	375
	223381	CV 10x10	F	O	T	-40	365	393	357	372
	223381	CV 10x10	F	O	L	-40	386	367	384	379
	223383	CV 10x10	F	O	T	-40	406	383	368	386
	223383	CV 10x10	F	O	L	-40	384	369	381	378
	223385	CV 10x10	F	O	T	-40	374	410	394	393
	223385	CV 10x10	F	O	L	-40	357	397	405	386
	223390	CV 10x10	F	O	T	-40	434	389	421	414
	223390	CV 10x10	F	O	L	-40	386	369	383	379
761895	223413	CV 10x10	F	O	T	-40	377	394	390	387
	223413	CV 10x10	F	O	L	-40	416	405	390	404
	223419	CV 10x10	F	O	T	-40	315	374	339	343
	223419	CV 10x10	F	O	L	-40	383	382	413	393
952378	223333	CV 10x10	F	O	T	-40	381	408	396	395
	223333	CV 10x10	F	O	L	-40	388	393	417	399
952379	227749	CV 10x10	F	O	T	-40	330	376	387	364
	227749	CV 10x10	F	O	L	-40	351	370	380	367

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J

F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
756793	205575	.031	.326	1.600	.009	.0007	.030	.172	.170	.006	.163	.003	.035	.011	.0049	.0002	.0020	.0016	.0020	.0020
761019	216794	.030	.323	1.610	.006	.0009	.035	.171	.170	.005	.156	.003	.035	.012	.0062	.0002	.0020	.0025	.0020	.0020
761893	223378	.029	.321	1.620	.007	.0004	.041	.172	.170	.004	.157	.004	.035	.013	.0055	.0002	.0020	.0018	.0020	.0020
761894	223380	.026	.323	1.610	.007	.0004	.041	.179	.170	.006	.158	.004	.035	.012	.0053	.0002	.0020	.0014	.0020	.0020
761895	223419	.027	.341	1.620	.006	.0004	.042	.170	.170	.004	.157	.004	.035	.012	.0051	.0002	.0020	.0025	.0020	.0020
952378	194183	.032	.324	1.600	.006	.0013	.036	.172	.170	.007	.157	.003	.034	.011	.0069	.0002	.0020	.0022	.0020	.0020
952379	194402	.032	.316	1.590	.005	.0011	.036	.177	.170	.006	.157	.003	.034	.011	.0071	.0002	.0020	.0017	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No:
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.42	.22	.120	.110	
756793	205575	.0020	.0020	.36	.14	.038	.049	6.12
761019	216794	.0020	.0020	.36	.14	.038	.050	5.65
761893	223378	.0020	.0020	.36	.14	.039	.052	7.45
761894	223380	.0020	.0020	.35	.14	.039	.051	7.74
761895	223419	.0020	.0020	.35	.14	.039	.051	8.24
952378	194183	.0020	.0020	.36	.14	.037	.048	5.22
952379	194402	.0020	.0020	.36	.14	.037	.048	5.07

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No :
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No
Office: Vienna
Signature

08-JAN-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
T.A.L. TUBI ACCIAIO LOMBARDA SPA	1723002029	123A30A	Q012301679

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **20.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

2611/1/2023

List č. - *Sheet No.* - *Pagina No.*: **1 / 5**

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT221835

Číslo položky - Item number - Numero di articolo:
2

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF220604

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 256603/1/1 3243A59

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS672DL RS189YI

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3025777

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**48.260** mm
Hrúbka steny - Wall thickness - Spessore:	**5.080** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**102**
Celková dĺžka - Total length - Lunghezza totale:	**612.00** m
Celková hmotnosť - Total mass - Peso totale:	**3450.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto **v Podbrezovej**
Location **Taz**
Localitá

Dátum **17.01.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2450/ 3402

Approved by MBRONZINI on 23/01/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
Number
Numero

2611/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
26081	**102**	**612**	**3450**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
26081		**0.15**	**0.52**	**0.22**	**0.011**	**0.006**	**0.17**	**0.07**	**0.07**	**0.024**	**0.04**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
26081		**0.0001**	**0.28**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
26081	**1**	**0.16**	**0.52**	**0.23**	**0.012**	**0.007**	**0.18**	**0.07**	**0.07**	**0.022**	**0.03**	**0.001**	**0.001**	**0.001**
26081	**2**	**0.16**	**0.51**	**0.23**	**0.010**	**0.007**	**0.17**	**0.07**	**0.07**	**0.023**	**0.03**	**0.001**	**0.001**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
26081	**1**	**0.0002**
26081	**2**	**0.0002**

Miesto **v Podbrezovej**
Location
Localitá

Taz

Dátum **17.01.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2451/ 3402

Approved by MBRONZINI on 23/01/23

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Číslo
Number
Numero

2611/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265	240	290	415	23.0	*
					max. ---	---	---	570	---	---
1	**26081**	A065471/22	12.82x4.95	L / V	**397**	**389**	**388**	**497**	**30.2**	**29.3**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**26081**	A065470/22	KV 40 - ---	**126, 132, 138**	**132**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A065470/22	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.80 mm

Miesto **v Podbrezovej**
Location **Taz**
Località

Dátum **17.01.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2452/ 3402

Approved by MBRONZINI on 23/01/23

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ŽELEZIARNE PODBREZOVÁ

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Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

2611/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.80** mm	

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto **v Podbrezovej** *Location* *Localitá*	**Taz**	Dátum **17.01.2023** *Date* *Data*	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2453/ 3402

Approved by MBRONZINI on 23/01/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
Number
Numero

2611/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1886201020

Miesto *Location* *Località*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**17.01.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2454/ 3402

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EN 10204:2004/3.1

Číslo
Number
Numero

50165/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231752

Číslo položky - Item number - Numero di articolo:
4

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230765

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 268248/1/1 2343761

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM296CK ZM555YC

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3031131

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3326429

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**48.260** mm
Hrúbka steny - Wall thickness - Spessore:	**5.080** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**95**
Celková dĺžka - Total length - Lunghezza totale:	**573.00** m
Celková hmotnosť - Total mass - Peso totale:	**3152.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2455/ 3402

Approved by D.MOLINARI on 14/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50165/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
33537	**95**	**573**	**3152**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
33537		**0.16**	**0.53**	**0.22**	**0.010**	**0.008**	**0.20**	**0.05**	**0.07**	**0.029**	**0.02**	**0.001**	**0.006**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
33537		**0.0001**	**0.28**	**0.007**	**0.006**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
33537	**1**	**0.16**	**0.54**	**0.21**	**0.012**	**0.008**	**0.22**	**0.06**	**0.11**	**0.026**	**0.04**	**0.001**	**0.006**	**0.001**
33537	**2**	**0.16**	**0.53**	**0.22**	**0.010**	**0.007**	**0.21**	**0.05**	**0.08**	**0.028**	**0.03**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
33537	**1**	**0.0002**
33537	**2**	**0.0001**

Miesto **v Podbrezovej**
Location **Moc**
Localitá

Dátum **13.11.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2456/ 3402

Approved by D.MOLINARI on 14/11/23

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Number
Numero

50165/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.	265	240	290	415	23.0	*
					max.	---	---	---	570	---	---
1	**33537**	A056158/23	12.41x5.39	L / V	**365**	**355**	**361**	**484**	**28.2**	**27.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**33537**	A056158/23	KV 40 - ---	**102, 105, 117**	**108**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A056158/23	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.80 mm

Miesto **v Podbrezovej**
Location **Moc**
Località

Dátum **13.11.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2457/ 3402

Approved by D.MOLINARI on 14/11/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero
50165/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.80** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto *Location* *Localitá*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2458/ 3402

Approved by D.MOLINARI on 14/11/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50165/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1893777322

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2459/ 3402

Approved by D.MOLINARI on 14/11/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43029/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231264

Číslo položky - Item number - Numero di articolo:
4

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230549

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 265391/1/1 3333C60

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM135CV ZM692YE

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030319

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325521

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**33.400** mm
Hrúbka steny - Wall thickness - Spessore:	**4.550** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**421**
Celková dĺžka - Total length - Lunghezza totale:	**2532.00** m
Celková hmotnosť - Total mass - Peso totale:	**8227.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**26.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2460/ 3402

Approved by D.MOLINARI on 27/09/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
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Certificato di collaudo
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Číslo
Number
Numero

43029/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
32764	**421**	**2532**	**8227**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
32764		**0.17**	**0.50**	**0.23**	**0.012**	**0.006**	**0.15**	**0.05**	**0.06**	**0.026**	**0.03**	**0.002**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
32764		**0.0001**	**0.28**	**0.005**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
32764	**1**	**0.17**	**0.50**	**0.23**	**0.010**	**0.006**	**0.15**	**0.04**	**0.06**	**0.027**	**0.03**	**0.001**	**0.001**	**0.000**
32764	**2**	**0.17**	**0.50**	**0.23**	**0.011**	**0.006**	**0.15**	**0.04**	**0.06**	**0.029**	**0.03**	**0.001**	**0.001**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32764	**1**	**<0.0001**
32764	**2**	**<0.0001**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **26.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Taz

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2461/ 3402

Approved by D.MOLINARI on 27/09/23

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ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero

43029/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.	265	240	290	415	23.0	*
					max.	---	---	---	570	---	---
1	**32764**	A041161/23	12.62x4.46	L / V		**411**	**410**	**410**	**512**	**30.2**	**27.8**
2	**32764**	A041162/23	12.60x4.48	L / V		**404**	**406**	**404**	**506**	**30.0**	**27.5**
3	**32764**	A041163/23	12.69x4.44	L / V		**409**	**405**	**404**	**503**	**31.1**	**28.8**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**32764**	A041161/23	KV 40 - ---	**108, 114, 117**	**113**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A041161/23	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Miesto **v Podbrezovej**
Location **Taz**
Localitá

Dátum **26.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2462/ 3402

Approved by D.MOLINARI on 27/09/23

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EN 10204:2004/3.1

Číslo
Number
Numero

43029/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm
Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Miesto *Location* *Localitá*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**26.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2463/ 3402

Approved by D.MOLINARI on 27/09/23

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Číslo
Number
Numero

43029/1/2023

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1802560504

Miesto *Location* *Localitá*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**26.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2464/ 3402

Approved by D.MOLINARI on 27/09/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
Number
Numero

50163/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231752

Číslo položky - Item number - Numero di articolo:
2

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230765

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 268248/1/1 2343759

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM296CK ZM555YC

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3031131

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3326429

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**33.400** mm
Hrúbka steny - Wall thickness - Spessore:	**4.550** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**152**
Celková dĺžka - Total length - Lunghezza totale:	**917.00** m
Celková hmotnosť - Total mass - Peso totale:	**3006.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2465/ 3402

Approved by D.MOLINARI on 14/11/23

ŽELEZIARNE® PODBREZOVÁ

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Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50163/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
33644	**152**	**917**	**3006**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
33644		**0.16**	**0.53**	**0.22**	**0.011**	**0.006**	**0.17**	**0.09**	**0.06**	**0.025**	**0.01**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
33644		**0.0001**	**0.28**	**0.008**	**0.007**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
33644	**1**	**0.16**	**0.53**	**0.22**	**0.010**	**0.006**	**0.17**	**0.10**	**0.06**	**0.025**	**0.02**	**0.001**	**0.005**	**0.000**
33644	**2**	**0.16**	**0.53**	**0.22**	**0.011**	**0.007**	**0.18**	**0.10**	**0.06**	**0.024**	**0.02**	**0.001**	**0.005**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
33644	**1**	**0.0001**
33644	**2**	**0.0001**

Miesto **v Podbrezovej**
Location **Moc**
Localitá

Dátum **13.11.2023**
Date
Data

Závodný znalec **Ing. Vojtas Miroslav**
Works Inspector
Ispettore della fabbrica

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2466/ 3402

Approved by D.MOLINARI on 14/11/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50163/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265	240	290	415	23.0	*
					max. ---	---	---	570	---	---
1	**33644**	A056461/23	12.71x4.80	L / V	**374**	**366**	**368**	**478**	**32.2**	**31.4**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**33644**	A056461/23	KV 40 - ---	**80, 84, 88**	**84**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A056461/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.40 mm

Miesto **v Podbrezovej**
Location
Località **Moc**

Dátum **13.11.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2467/ 3402

Approved by D.MOLINARI on 14/11/23

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ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
Number
Numero
50163/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm	

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto **v Podbrezovej** *Location* *Localitá*	**Moc**	Dátum **13.11.2023** *Date* *Data*	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2468/ 3402

Approved by D.MOLINARI on 14/11/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50163/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=637102212

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2469/ 3402

Approved by D.MOLINARI on 14/11/23

Mittal-Auftrags-Nr:

Certificate Reference No (A03): **040062838700**
No de certificat:
Zeugnis-Nr:

Cast/Heat No (B07):
Coulée No:
Schmelzen-Nr:

Product (B01): FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES
Produit:
Produkt:

Specification (B02): API5L:18 B/X42 PSL1 ISO3183:12 L245/L290 ASTM A106B:19 A53B:22 A530:18 ASME SA106B/SA53
Spécification:
Angabe:

Product Marking (B06): ARCELORMITTAL SA API Spec 5L-0319 MONOGRAM 05-23 ISO3183 L245/L290 PSL1 ASTM/ASME A/SA1
Larquage de produit:
Produktkennzeichnung:
TC1 60.300 3.910 6.000 B/X42 PSL1 SMLS CAST NO: 2302554 PROD/O NO: T0343007710 TESTED 2

General Information:

Information Générale:
Allgemeine Information:

Quantity (B08) *Quantité Menge*	Mass (B12) *Poids Gewicht*	Dimensions (B09-B11) *Dimensions / Maße*			Total Length *Longeur Länge*
		Tube OD *Diamètre Durchschnitt*	Thickness *Epaisseur Stärke*	Length *Longeur Länge*	
1,594(ea)	51,996.280(kg)	60.300(mm)	3.910(mm)	6.000(m)	9,564.000(m)

Steel making process (C70) *Procédé déleboration de l'aciers Stahlerschmelzungsverfahren*
Basic Oxygen Furnace

Chemical Composition: (C71-C92)

R05-(Cr+Ni+Mo+Cu+V) R22-(V+Nb+Ti) R24-(Nb+V)

Analyse sur coulée Schmeltzenanalyse

Element(%)	C	Si	Mn	S	P	Cr	Ni	Mo	Cu	V	Al	Ti	Sn	Ca	N	B	Nb
Minimum	-		0.29	-	-	-	-	-	-								-
Maximum	0.200		1.06	0.010	0.020	0.30	0.30	0.100	0.300								0.0100
Heat	0.170	0.31	1.00	0.003	0.014	0.16	0.14	0.001	0.011	0.002	0.029	0.002	0.001	0.0010	0.0090	0.0005	0.0010
Product	0.17	0.30	0.98	0.004	0.014	0.16	0.13	0.003	0.010	0.004	0.028	0.002	0.003	0.0021	0.0058	0.0003	0.0000
Product (ADD)	0.19	0.31	0.99	0.004	0.014	0.16	0.13	0.003	0.010	0.004	0.028	0.002	0.003	0.0020	0.0060	0.0003	0.0010

Quality Assurance Engineer, Certification: M Makgoba ***Date of Release: 2023.05.30***

We hereby certify that the material was manufactured, tested and inspected to and fully comply with the requirements of referenced specifications. No changes, amendments or additions may be made to this document. Any changes which are effected shall invalidate this certificate.
Nous certifions que le matériel a été fabriqué, testé et inspecté et se conforme pleinement aux exigences de spécifications référencées. Il est interdit de modifier ou de corriger ce document ou d'y ajouter quoi que ce soit. Tout changement invalide le présent certificat.
Wir bestätigen hiermit, daß das Material wurde hergestellt, geprüft und inspiziert und voll mit den Anforderungen der referenzierten Spezikationen. Diese Unterlage darf in keiner Weise geändert, abgeändert oder ergänzt werden. Jede derartige Änderung wird die Gültigkeit dieser Bes

ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 29 MT 174 HEAT 2302554 DIMENSIONS 60,3 x 3,91

Certificate Reference No (A03): **040062838700**
No de certificat:
Zeugnis-Nr:

Cast/Heat No (B07):
Coulée No:
Schmelzen-Nr:

Product (B01): FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES
Produit:
Produkt:

Specification (B02): API5L:18 B/X42 PSL1 ISO3183:12 L245/L290 ASTM A106B:19 A53B:22 A530:18 ASME SA106B/SA5
Spécification:
Angabe:

Product Marking (B06): ARCELORMITTAL SA API Spec 5L-0319 MONOGRAM 05-23 ISO3183 L245/L290 PSL1 ASTM/ASME A/SA
Larquage de produit:
Produktkennzeichnung:
TC1 60.300 3.910 6.000 B/X42 PSL1 SMLS CAST NO: 2302554 PROD/O NO: T0343007710 TESTED

Mechanical Properties at Room Temperature 25°C

Propriétés Mécaniques à température ambiante 25°C
Mechanische Eigenschaften bei Raumtemperatur 25°C

*** Elongation to BS EN ISO 2566 table 7: 5.65 $\sqrt{S_0}$**
Élongation au BS EN ISO 2566 tableau 7: 5.65 $\sqrt{S_0}$
Verlängerung zu BS EN ISO 2566 Tabelle 7: 5.65 $\sqrt{S_0}$

Orientation and width of tensile piece C02: **Longitudinal, Strip, 19.470mm**
Orientation de le' prouvette de tension, Largeur de l'échantillon
Richtung und Breite der Zugprobe

Specification Spécification Angabe Limits Limite Grenze	UTS (Rm) C12 Force de tension Zugfestigkeit MPa	Yield (Rs) C11 Limit élastique Fließgrenze MPa	% EL C13 Allong Dehnu 50 mm	* % EL Allong Dehnu 5.65$\sqrt{S_0}$
Minimum	415	290	30.00	
Maximum	570	-	-	
Sample (1)	521	383	33.00	31.00
Sample (2)	534	394	35.00	33.00

TECHNOLOGICAL TESTS *EPREUVES TECHNOLOGIQUES* *TECHNISCHE PRÜFUNGEN*	
Bending (D51-D99) Essai de pliage Biegeversuch	PASSED
Flattening Test (D51-D99) Essai d'aplatissement Ringfaltversuch	PASSED
Flaring Test (D51-D99) Essai de rabattement de collerette Aufweitversuch	PASSED
Hydrostatic (D02-D50) Hydrostatique Hydrostatisch	20700 kPa (3000 psi) - 5 sec
Electromagnetic Insp (D02-D50) Inspection électromagnetique Elektromagnetische Prüfung	PASS - ASTM E570 - 12.5% NOTCH

Quality Assurance Engineer, Certification: M Makgoba ***Date of Release: 2023.05.30***

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ROSETTI MARINO S.P.A. P.O.172300202 9 123A30 TAL JOB N°323002954
N° 29 MT 174 HEAT 2302554 DIMENSIONS 60,3 x 3,91

Mittal-Auftrags-Nr:

Certificate Reference No (A03): **040062838700**
No de certificat:
Zeugnis-Nr.

Cast/Heat No (B07):
Coulée No:
Schmelzen-Nr.

Product (B01): FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES
Produit:
Produkt:

Specification (B02): API5L:18 B/X42 PSL1 ISO3183:12 L245/L290 ASTM A106B:19 A53B:22 A530:18 ASME SA106B/SA53
Spécification:
Angabe:

Product Marking (B06): ARCELORMITTAL SA API Spec 5L-0319 MONOGRAM 05-23 ISO3183 L245/L290 PSL1 ASTM/ASME A/SA
Larquage de produit:
Produktkennzeichnung:
TC1 60.300 3.910 6.000 B/X42 PSL1 SMLS CAST NO: 2302554 PROD/O NO: T0343007710 TESTED

Remarks (Z01):
Remarque:
Bemerkung:

Material in accordance with NACE MR0175:2015/ISO15156-2:2015/ISO 17945:2015 and MR0103:2015. Dimensions to ASME B36.10-2017. End finish according to ASME B16.25:17
Material conforms to the hot yield strength requirements as per ASME, Sect II, Part D, Table Y-1, and the general requirements of ASME, Sect II, Part A, Ed 2021. Material conforms to AD 2000-Merkblatt W4.
Material conforms to the visual inspection and dimensional tolerance requirements of the specification. A suitable fine grain practice is followed in manufacturing. Residual magnetism measure before shipment was less than 30Gs.
La Société ArcelorMittal South Africa garantit que les produits objet du présent certificat, respectent en leur totalitéles prescriptions de l'Article 15 de l'Arrete Ministérel du 24 mars 1978 modifé.
C<=0.25%,P<=0.05%, R<=700N/mm2,E<=0.9xR
A%(Lo=5.65VSo) min.16% en long. R(A-2)>=10500
A% (Lo=5.65VSo) min.16% en transv. RxA>=10500
ArcelorMittal SA Tubular Products operates a QA System meeting the requirements of PED 2014/68/EU, Annex I,Par 4.3 and AD 2000-Merkblatt W0 ,certified by TÜV Rheinland Industrie Service GmbH. Certificate No. 01 202 ZA/Q-02 0004.
Non-harmonized materials require Particular Material Appraisal. The impact strength is guaranteed to exceed 27J at 0°C (transverse).

HARDSTAMPED with low stress tool: API logo, AMSA, S

Quality Assurance Engineer, Certification: M Makgoba ***Date of Release: 2023.05.30***

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ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 29 MT 174 HEAT 2302554 DIMENSIONS 60,3 x 3,91

MATERIAL TEST CERTIFICATE SEAMLESS TUBE

CERTIFICATE DE RECEPTION - TUBES D'ACIER SANS SOUDURE
NAHMEPRÜFZEUGNIS - NAHTLOSE STAHLROHRE

EN10204: 2004 Type 3.1
Licensed under
API 5L
API 5CT
ISO9001:2015
PED2014/08/EU

ArcelorMittal South Africa Limited
Tubular Products
273 Genl. Hertzog Rd
Peacehaven Vereeniging 1939
PO Box 48 Vereeniging 1930
South Africa
Telephone +27 (0)16 450 4220
Fax +27 (0)16 423 4906

Steelmaking Facility
ArcelorMittal South Africa Ltd
Iscor Road
Newcastle 2940
PO Box, Newcastle 2940
South frica

Customer (A06): *Client: Kunde:*	**TUBI ACCIAIO LOMBARDA**
Order No (A08): *No. de commande Mittal: Mittal-Auftrags-Nr:*	**4000030358**
Certificate Reference No (A03): *No de certificat: Zeugnis-Nr:*	**040062838577**
Product (B01): *Produit: Produkt:*	**FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES**
Specification (B02): *Spécification: Angabe:*	**ASTM A106/A53B:18/A530:18 ASME SA106/SA53B:17/SA530:17**
Product Marking (B06): *Larguage de produit: Produktkennzeichnung:*	**ARCELORMITTAL SA ASTM A53/A106B ASME SA53/SA106B(050sch040) 60.300 OD X 3.910 WT X 6.000 L CAST NO: 2302694 PROD/O NO: T0513624201 NDE**
Customer Order/Contract No (A07): *No de commande client: Kundenauftrags-Nr:*	**SIT8 182134**
Material No: *No de matériau: Werkstoff-Nr:*	**1000040494**
Cast/Heat No (B07): *Coulée No: Schmelzen-Nr:*	**2302694**

General Information:

Information Générale: Allgemeine Information:

Quantity (B08) *Quantité Menge*	Mass (B12) *Poids Gewicht*	Dimensions (B09-B11) *Dimensions / Maße*			Total Length *Longeur Länge*
		Tube OD *Diamétre Durchscnitt*	Thickness *Epaisseur Stärke*	Length *Longeur Länge*	
1,071()	(kg)	60.300(mm)	3.910(mm)	6.000(m)	6,426.000(m)

Steel making process (C70) *Procédé deleboration de l'aciers Stahlerschmelzungsverfahren*	Final Rolling Operation (B04) As Rolled *Fin de laminage Walzende*
Basic Oxygen Furnace	Normalised rolled with finishing in the range of 880 - 945°C and cooled in still air

Chemical Composition: (C71-C92)

Analyse sur coulée Schmeltzenanalyse

Element(%)	C	Si	Mn	S	P	Cr	Ni	Mo	Cu	V	Al	Ti	Sn	Ca	N	B	Nb	CE
Minimum	-	0.10	-	-	-	-	-	-	-	-								-
Maximum	0.300	-	1.20	0.045	0.050	0.40	0.40	0.150	0.400	0.080								-
Heat	0.180	0.33	1.00	0.004	0.011	0.16	0.15	0.005	0.012	0.004	0.039	0.001	0.003	0.0030	0.0090	0.0004	0.0010	0.39

Quality Assurance Engineer, Certification: M Makgoba ***Date of Release: 2023.05.30*** ***Certified by:*** Makgoba

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Approved by QUALITY1 on 03/11/23

MATERIAL TEST CERTIFICATE SEAMLESS TUBE

CERTIFICATE DE RECEPTION - TUBES D'ACIER SANS SOUDURE
NAHMEPRÜFZEUGNIS - NAHTLOSE STAHLROHRE

ArcelorMittal South Africa Limited
Tubular Products
273 Genl. Hertzog Rd
Peacehaven Vereeniging 1939
PO Box 48 Vereeniging 1930
South Africa
Telephone +27 (0)16 450 4220
Fax +27 (0)16 423 4906

EN10204: 2004 Type 3.1
Licensed under
API 5L
API 5CT
ISO9001:2015
PED2014/08/EU

Steelmaking Facility
ArcelorMittal South Africa Ltd
Iscor Road
Newcastle 2940
PO Box, Newcastle 2940
South frica

Customer (A06): *Client: Kunde:*	**TUBI ACCIAIO LOMBARDA**	Customer Order/Contract No (A07): *No de commande client: Kundenauftrags-Nr:*	**SIT8 182134**
Order No (A08): *No. de commande Mittal: Mittal-Auftrags-Nr:*	**4000030358**	Material No: *No de matériau: Werkstoff-Nr:*	**1000040494**
Certificate Reference No (A03): *No de certificat: Zeugnis-Nr:*	**040062838577**	Cast/Heat No (B07): *Coulée No: Schmelzen-Nr:*	**2302694**
Product (B01): *Produit: Produkt:*	**FULLY KILLED HOT FINISHED CARBON STEEL SEAMLESS TUBES**		
Specification (B02): *Spécification: Angabe:*	**ASTM A106/A53B:18/A530:18 ASME SA106/SA53B:17/SA530:17**		
Product Marking (B06): *Larguage de produit: Produktkennzeichnung:*	**ARCELORMITTAL SA ASTM A53/A106B ASME SA53/SA106B(050sch040) 60.300 OD X 3.910 WT X 6.000 L CAST NO: 2302694 PROD/O NO: T0513624201 NDE**		

Mechanical Properties at Room Temperature 25°C

Propriétés Mécaniques à température ambiante 25°C
Mechanische Eigenschaften bei Raumtemperatur 25°C

*** Elongation to BS EN ISO 2566 table 7: 5.65 $\sqrt{S_0}$**
Élongation au BS EN ISO 2566 tableau 7: 5.65 $\sqrt{S_0}$
Verlängerung zu BS EN ISO 2566 Tabelle 7: 5.65 $\sqrt{S_0}$

Orientation and width of tensile piece C02: **Longitudinal, Strip, 19.260mm**
Orientation de le' prouvette de tension, Largeur de l'échantillon
Richtung und Breite der Zugprobe

Specification Spécification Angabe **Limits** Limite Grenze	**UTS (Rm) C12** Force de tension Zugfestigkeit **MPa**	**Yield (Rs) C11** Limit élastique Fließgrenze **MPa**	**% EL C13** Allong Dehnu **50 mm**	*** % EL** Allong Dehnu **5.65$\sqrt{S_0}$**
Minimum	415	240	30.00	
Maximum	-	-	-	
Sample (1)	513	355	34.00	
Sample (2)	521	365	36.00	

TECHNOLOGICAL TESTS *EPREUVES TECHNOLOGIQUES TECHNISCHE PRÜFUNGEN*	
Bending (D51-D99) Essai de pliage Biegeversuch	PASSED
Flattening Test (D51-D99) Essai d'aplatissement Ringfaltversuch	PASSED
Hydrostatic (D02-D50) Hydrostatique Hydrostatisch	Hydrostatic test not required

Orientation of impact test piece (C41):
Orientation de le' prouvette
Richtung das Probestüchs

TECHNOLOGICAL TESTS *EPREUVES TECHNOLOGIQUES TECHNISCHE PRÜFUNGEN*	
Electromagnetic Insp (D02-D50) Inspection électromagnetique Elektromagnetische Prüfung	PASS - ASTM E570 - 12.5% NOTCH
Ultrasonic inspection (D02-D50) Inspection ultrasoniq Ultraschallprüfung	UT not required
Hardness (HV 10kg) C31 Dureté Härte	161 161 164

Quality Assurance Engineer, Certification: M Makgoba ***Date of Release: 2023.05.30*** ***Certified by:*** Makgoba

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Approved by QUALITY1 on 03/11/23

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EN10204: 2004 Type 3.1
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Certificate Reference No (A03): *No de certificat: Zeugnis-Nr:*	**040062838577**
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Specification (B02): *Spécification: Angabe:*	**ASTM A106/A53B:18/A530:18 ASME SA106/SA53B:17/SA530:17**
Product Marking (B06): *Larguage de produit: Produktkennzeichnung:*	**ARCELORMITTAL SA ASTM A53/A106B ASME SA53/SA106B(050sch040) 60.300 OD X 3.910 WT X 6.000 L CAST NO: 2302694 PROD/O NO: T0513624201 NDE**
Customer Order/Contract No (A07): *No de commande client: Kundenauftrags-Nr:*	**SIT8 182134**
Material No: *No de matériau: Werkstoff-Nr:*	**1000040494**
Cast/Heat No (B07): *Coulée No: Schmelzen-Nr:*	**2302694**

Remarks (Z01):

Remarque: Bemerkung:

Material in accordance with NACE MR0175:2015/ISO15156-2:2015/ISO 17945:2015 and MR0103:2015. Dimensions to ASME B36.10-2017. End finish according to ASME B16.25:17
Material conforms to the hot yield strength requirements as per ASME, Sect II, Part D, Table Y-1, and the general requirements of ASME, Sect II, Part A, Ed 2021. Material conforms to AD 2000-Merkblatt W4.
Material conforms to the visual inspection and dimensional tolerance requirements of the specification. A suitable fine grain practice is followed in manufacturing. Residual magnetism measure before shipment was less than 30Gs.
La Sociéte ArcelorMittal South Africa garantit que les produits objet du présent certificat, respectent en leur totalitéles prescriptions de l'Article 15 de l'Arrete Ministérel du 24 mars 1978 modifé.
C<=0.25%,P<=0.05%, R<=700N/mm2,E<=0.9xR
A%(Lo=5.65VSo) min.16% en long. R(A-2)>=10500
A% (Lo=5.65VSo) min.16% en transv. RxA>=10500
ArcelorMittal SA Tubular Products operates a QA System meeting the requirements of PED 2014/68/EU, Annex I,Par 4.3 and AD 2000-Merkblatt W0 ,certified by TÜV Rheinland Industrie Service GmbH. Certificate No. 01 202 ZA/Q-02 0004.
Non-harmonized materials require Particular Material Appraisal. The impact strength is guaranteed to exceed 27J at 0°C (transverse).

HARDSTAMPED with low stress tool: API logo, AMSA, Size, Heat number, Grade, NDE

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

44257/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231030

Číslo položky - Item number - Numero di articolo:
1

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230484

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 264034/1/2 7333307

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
TV607EN TV243YH

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
7003479

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
7323649

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

.
Seamless steel tubes in cold drawn execution according to Hot rolled standard.
.

Vonkajší priemer - Outside diameter - Diametro esterno:	**21.340** mm	
Hrúbka steny - Wall thickness - Spessore:	**3.730** mm	
Dĺžka - Length - Lunghezza:	**6000.000** mm	[-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**624**	
Celková dĺžka - Total length - Lunghezza totale:	**3783.00** m	
Celková hmotnosť - Total mass - Peso totale:	**6158.00** kg	

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné žíhanie - *Normalizing* - *Normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej koll**	Dátum *Date* *Data*	**03.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2476/ 3402

Approved by D.MOLINARI on 05/10/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

44257/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
31871	**78**	**470**	**770**	**E**
32402	**546**	**3313**	**5388**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min. max.	0.20	1.06	0.15 0.35	0.020	0.010	0.30	0.30	0.40	0.015 0.060	0.12	0.040	0.030	0.019
31871		**0.15**	**0.54**	**0.23**	**0.015**	**0.005**	**0.19**	**0.06**	**0.07**	**0.026**	**0.02**	**0.001**	**0.002**	**0.001**
32402		**0.15**	**0.52**	**0.24**	**0.015**	**0.008**	**0.19**	**0.06**	**0.08**	**0.028**	**0.02**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min. max.	0.0010	0.40	0.150	0.060
31871		**0.0002**	**0.27**	**0.004**	**0.003**
32402		**0.0002**	**0.27**	**0.003**	**0.002**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
31871	**1**	**0.16**	**0.55**	**0.23**	**0.014**	**0.005**	**0.19**	**0.06**	**0.08**	**0.025**	**0.02**	**0.001**	**0.002**	**0.001**
31871	**2**	**0.16**	**0.55**	**0.23**	**0.014**	**0.005**	**0.19**	**0.06**	**0.08**	**0.026**	**0.02**	**0.001**	**0.002**	**0.001**
32402	**1**	**0.15**	**0.52**	**0.24**	**0.015**	**0.009**	**0.19**	**0.05**	**0.08**	**0.029**	**0.02**	**0.001**	**0.002**	**<0.000**
32402	**2**	**0.15**	**0.52**	**0.24**	**0.015**	**0.008**	**0.20**	**0.05**	**0.08**	**0.028**	**0.02**	**0.001**	**0.002**	**<0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
31871	**1**	**0.0002**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **03.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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2477/ 3402

Approved by D.MOLINARI on 05/10/23

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EN 10204:2004/3.1

Číslo
Number
Numero

44257/1/2023

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
31871	**2**	**0.0002**
32402	**1**	**0.0002**
32402	**2**	**0.0003**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento*			Pevnosť v ťahu *Tensile strength* *Carico di rottura*	Ťažnosť *Elongation* *Allungamento*	
					ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Rm [MPa]	A5,65 [%]	2" [%]
C. Nr	Predpis - Requirements - Requisiti:			min. max.	265 ---	240 ---	290 ---	415 570	23.0 ---	* 30.0 ---
1	**31871**	B015051/23	21.30x3.80	L / R	**312**	**307**	**307**	**467**	**33.8**	**42.6**
2	**32402**	B020982/23	21.34x3.75	L / R	**312**	**310**	**310**	**453**	**35.5**	**46.0**
3	**32402**	B020983/23	21.33x3.74	L / R	**316**	**313**	**314**	**456**	**35.4**	**45.8**
4	**32402**	B023800/23	21.37x3.75	L / R	**321**	**320**	**320**	**462**	**36.9**	**47.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
1.40 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
1.40 mm

Miesto **v Podbrezovej**
Location
Località **koll**

Dátum **03.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica
Ing. Vojtas Miroslav

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2478/ 3402

Approved by D.MOLINARI on 05/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

44257/1/2023

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Železiarne Podbrezová garantujú predpísané hodnoty skúšky rázom v ohybe 40.00 J / -15.00 °C bez vykonania skúšky z dôvodu nedostatočného rozmeru rúry.
Zeleziarne Podbrezova guarantees impact values 40.00 J / -15.00 °C without performing the test due to the size of pipe.
Zeleziarne Podbrezova garante i valori della prova 40.00 J / -15.00 °C di resilienza senza esecuzione della prova a causa di dimensioni del tubo.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota žíhania je min. 900°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Normalized at min. temperature of 900°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% durante Lo: 5.65 √ So. La temperatura di ricottura è al min. 900 °C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=81427817

Miesto *Location* *Localitá*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**03.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2479/ 3402

Approved by D.MOLINARI on 05/10/23

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ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

30734/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT230594

Číslo položky - Item number - Numero di articolo:
2

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230292

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 261753/1/1 3323A09

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZV675DC ZV081YH

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3029020

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3324048

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**26.670** mm
Hrúbka steny - Wall thickness - Spessore:	**3.910** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**348**
Celková dĺžka - Total length - Lunghezza totale:	**2088.00** m
Celková hmotnosť - Total mass - Peso totale:	**4619.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*: **v Podbrezovej** **sag**

Dátum *Date* *Data*: **27.06.2023**

Závodný znalec *Works Inspector* *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2480/ 3402

Approved by MBRONZINI on 12/07/23

ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero

30734/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
32227	**348**	**2088**	**4619**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium* - *acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer* - *Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
32227		**0.16**	**0.53**	**0.25**	**0.012**	**0.010**	**0.15**	**0.06**	**0.07**	**0.031**	**0.02**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
32227		**0.0001**	**0.28**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
32227	**1**	**0.16**	**0.53**	**0.24**	**0.011**	**0.010**	**0.16**	**0.07**	**0.07**	**0.030**	**0.02**	**0.001**	**0.001**	**0.001**
32227	**2**	**0.16**	**0.53**	**0.24**	**0.011**	**0.009**	**0.16**	**0.07**	**0.07**	**0.030**	**0.02**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32227	**1**	**0.0003**
32227	**2**	**0.0003**

Miesto **v Podbrezovej**
Location
Localitá
sag

Dátum **27.06.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2481/ 3402

Approved by MBRONZINI on 12/07/23

ROSETTI MARINO S.P.A. P.O. 1723002029 123A30 TAL JOB N°323002954
N° 17 MT 102 HEAT 32227 DIMENSIONS 26,7 x 3,91

ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
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30734/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.	265	240	290	415	23.0	* 30.0
					max.	---	---	---	570	---	---
1	**32227**	A031698/23	26.95x4.29	L / R		**349**	**346**	**347**	**478**	**30.8**	**44.6**
2	**32227**	A031699/23	26.93x4.30	L / R		**349**	**345**	**347**	**481**	**30.5**	**44.2**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**32227**	A031695/23	KV 40 - ---	**104, 112, 120**	**112**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A031695/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.40 mm

Miesto **v Podbrezovej**
Location **sag**
Localitá

Dátum **27.06.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2482/ 3402

Approved by MBRONZINI on 12/07/23

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N° 17 MT 102 HEAT 32227 DIMENSIONS 26,7 x 3,91

ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero
30734/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm	

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
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We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
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Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
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Magnetismo residuo max. 30.0 gauss.

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Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto **v Podbrezovej**
Location
Localitá
sag

Dátum **27.06.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica
Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2483/ 3402

Approved by MBRONZINI on 12/07/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

30734/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=718677086

Miesto *Location* *Localitá*: **v Podbrezovej** **sag**

Dátum *Date* *Data*: **27.06.2023**

Závodný znalec *Works Inspector* *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2484/ 3402

Approved by MBRONZINI on 12/07/23

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Číslo
Number
Numero

48217/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231581

Číslo položky - Item number - Numero di articolo:
1

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230675

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 267369/1/3 3343716

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM442CY ZM589YE

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030928

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3326184

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**26.670** mm
Hrúbka steny - Wall thickness - Spessore:	**3.910** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**226**
Celková dĺžka - Total length - Lunghezza totale:	**1362.00** m
Celková hmotnosť - Total mass - Peso totale:	**3036.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**30.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2485/ 3402

Approved by D.MOLINARI on 02/11/23

ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero

48217/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
33380	**226**	**1362**	**3036**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
33380		**0.16**	**0.52**	**0.23**	**0.015**	**0.006**	**0.16**	**0.08**	**0.07**	**0.028**	**0.04**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
33380		**0.0002**	**0.29**	**0.008**	**0.007**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
33380	**1**	**0.17**	**0.52**	**0.23**	**0.014**	**0.006**	**0.16**	**0.09**	**0.07**	**0.028**	**0.04**	**0.001**	**0.006**	**0.001**
33380	**2**	**0.17**	**0.51**	**0.22**	**0.013**	**0.005**	**0.16**	**0.09**	**0.07**	**0.028**	**0.04**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
33380	**1**	**0.0001**
33380	**2**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **30.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2486/ 3402

Approved by D.MOLINARI on 02/11/23

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ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero

48217/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.					
					265	240	290	415	23.0	* 30.0
					max.					
					---	---	---	570	---	---
1	**33380**	A053666/23	27.00x4.02	L / R	**384**	**382**	**383**	**490**	**35.5**	**50.0**
2	**33380**	A053667/23	26.95x4.04	L / R	**389**	**386**	**387**	**497**	**34.9**	**49.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**33380**	A053666/23	KV 40 - ---	**108, 116, 124**	**116**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A053666/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.40 mm

Miesto **v Podbrezovej**
Location
Localitá **Moc**

Dátum **30.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2487/ 3402

Approved by D.MOLINARI on 02/11/23

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48217/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm	

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto *Location* *Localitá*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**30.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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2488/ 3402

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48217/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=532248964

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**30.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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2489/ 3402

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ROSETTI MARINO S.P.A. P.O. 1723002029 123A30 TAL JOB N°323002954
N° 45 MT 517 HEAT WND12203760XX DIMENSIONS 273 X 6.35

Steel Grade	ASTM /ASME A/SA 106 Gr.B-API 5L Gr.B/L245-X42/L290 PSL1-EN 10216-2P265GH TC1	Process of manufacture	HR SMLS

NO.	Size (mm)	Length	Heat No.	Lot No.	PCS	WT (t)	Total length	Bundles	Tensile Test				% Shear area	Grain Size (Grade)	Impact Test	
									SampleType /Orientation /Dimension/GL (mm)	T.S (Rm)	Y.S(C1)	E.L %(A)			Impact Sample Type/Dimension (mm)	KV_8Impact Val
		m					m			MPa	MPa					-15℃
1	273*6.35	10-11.8	WnD12203763 XX	2222061346	102	46.180	1136.288	21	S/L38/50	488/470	345/324	46.5/45.0	/	8.5/8.5	T/5 L/5	77/66/52 86/92/78
2	273*6.35	10-11.8	WnD12203760 XX	2222061347	54	24.308	601.05	11	S/L25/50	476/474	319/321	44.0/40.0	/	8.5/8.5	T/5 L/5	60/65/55 80/79/82
3	273*6.35	10-11.8	WnD32204862 XX	2222061415	59	28.077	679.583	23	S/L38/50	467/469	330/336	44.0/43.5	/	8.5/8.5	T/5 L/5	64/66/80 80/82/86

NO.	Composition Type	Chemical Composition %																			
		C	Si	Mn	P	S	Cr	Ni	Cu	Al	Mo	V	Nb	Ti	Pb	C/Mn	Sb	Bi	Ca	N	H
1	R	0.18	0.25	0.91	0.010	0.002	0.03	0.01	0.01	0.032	0.002	0.001	0.001	0.014							
	C	0.17	0.23	0.93	0.009	0.004	0.01	0.01	0.01	0.026	0.005	0.001	0.002	0.012							
	C	0.15	0.23	0.91	0.009	0.004	0.02	0.01	0.01	0.027	0.001	0.001	0.004	0.012							
2	R	0.18	0.25	0.93	0.012	0.003	0.01	0.01	0.01	0.038	0.001	0.002	0.001	0.012							
	C	0.18	0.24	0.95	0.010	0.005	0.04	0.01	0.01	0.025	0.001	0.001	0.001	0.016							
	C	0.18	0.25	0.96	0.010	0.006	0.04	0.01	0.01	0.028	0.004	0.001	0.005	0.017							
3	R	0.18	0.26	0.91	0.009	0.002	0.02	0.01	0.01	0.030	0.004	0.002	0.001	0.013							
	C	0.15	0.25	0.91	0.008	0.003	0.02	0.01	0.01	0.024	0.001	0.001	0.003	0.013							
	C	0.15	0.24	0.91	0.008	0.004	0.03	0.01	0.01	0.027	0.001	0.001	0.001	0.013							

Total Bundles	Total Pieces	Total Length	Total Weight (t)	Cold Bending Test	Surface& Dimension	Pipe End (PE,BE)	Flatten	Residual Magnetic	SSC	HIC
		m								
55	215	2416.921	98.565	/	Qualified	BE	/	Qualified	/	/

NDT Type	NDT Method	NDT Standar
Defect(End)	EMI	ASTM E570
Defect(End)	UT	ASTM E213-
Defect(Body)	EMI	ASTM E570
Lamination(Body)	UT	ASTM E213-2

JIANGSU SPECIAL STEEL CO., LTD. 江苏特钢有限公司 质量证明专用章

L2—Notch depth:5% WT, L3—Notch depth:10% WT, L4-Notch depth:12.5% WT；notch length≤50mm, notch width≤1mm. MPI Sensitivity Test Panel: A1-30/100. Tensile Test:Sample Orientation:T= Transverse ,L= Longitudinal. Tensile Sample Type:S=Strip，C=Clubbed，F= Full-sec
Test:T= Transverse ,L= Longitudinal .Impact Sample Dimension:10-10*10*55mm.7.5-10*7.5*55mm.5-10*5*55mm.Composition Type: R-HeatAnalysis．C- Product Analysis．CE_{IIW}=C+Mn/6+(Cr+Mo+V)/5+(Cu+Ni)/15 CE_{PCM}=C+Si/30+(Mn+Cr+Cu)/20+Ni/60+Mo/15+V/10+5*B N--Normaliz
PE:plain end BE:bevel end .IN：Internal Surface；EX：External Surface；L：Longitudinally；T：Transversely

DATE:	INSPECTOR:	MANAGER OF INSPECTION:	
2022/7/4	王艳红	胡双凯	

NOTE:
1.We here certify that the products here in described has been manufactured ; 2.Sampled tested and inspected in accordance with the specification and purchase order， and meet with the requirement ; 3.All pipes be made free of radiation contamination ;4.No duplica
6.All products meet requirements of the above mentioned standards, purchase order and tech spec. TS01R.7.; Declaration of guarantee to ASME II part.D Table y1;7.Protocol number:QJX/JT-C0073-2022-01

ROSETTI MARINO S.P.A. P.O. 1723002029 123A30 TAL JOB N°323002954
N° 17 MT 192 HEAT 53972K DIMENSIONS 273 X 6.35

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **60757/23** Page: **1/1**

A07	Customer's Order (P.O.) No./Item No.: **OF230074**	A08	Manufacturer's Works Order No.: **59063/0/23**
A11	Supplier's Order No.: **3151020929**	A10	Advice - Note No.: **8151000053**
B08, B12/13	Quantity delivered: pcs / bdls: **51**; mtrs / feet: **565,177**; B13 Actual mass kgs / lbs: **24260**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO, 6-ZONA IND. 29017 FIORENZUOLA ARDA Italy**
B09-11	Dimensions: **273,0 X 6,35 mm (10"SCH20)**		
B02	Steel designation: **L245/B PSL1 L290/X42 PSL1 Grade B P265GH**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes , ASME B36.10M-22,
API Spec.5L-46th edit.18 PSL1, EN ISO 3183/19, EN 10216-2/13 +A1/19 TC1 - PED 2014/68/EU,
ASTM A106/A106M-19, ASTM A53/A53M-22, ASME SA106/SA106M-21, ASME SA53/SA53M-21- PED 2014/68/EU.
ASME II Part.D Table Y1-11a. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-15.
Normalized hot finished (880- 1000°C), cooling on still air. **TS01 Rev. 7 for T.A.L of 13.01.2021**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2

C71-92 Heat (H) and product (P) chemical analyses (%) — C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.		C	MN	SI	P	S	CU	NI	CR	ALt	MO	V	TI	NB	C_{eq}
53972K	**H**	**0,17**	**1,14**	**0,215**	**0,012**	**0,008**	**0,07**	**0,03**	**0,04**	**0,034**	**0,009**	**0,003**	**0,002**	**<0,003**	**0,38**
	P	0,17	1,09	0,205	0,011	0,008	0,07	0,03	0,04	0,029	0,006	0,002	0,002	<0,001	0,37
	P	0,17	1,08	0,203	0,011	0,008	0,07	0,03	0,04	0,029	0,006	0,002	0,002	<0,001	0,37

Z99

B07 / C04 Test results: Heat No. / Requirements:	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact test (KCV2)	HRB C30-32 Hardness
		P265GH	**min. 265**	**410 - 570**	**min. 23,0** (5d)	**A) L-5-14J / -10°C**	**max. 99**
		Grade B	**min. 240**	**min. 415**	**min. 26,0** (2")	**B) T-5-14J / -15°C**	
		L245/B	**min. 245**	**min. 415**	**min. 26,0** (2")		
		L290/X42	**min. 290**	**min. 415**	**min. 26,0** (2")		
		Longitudinal strip specimen 38,1 mm			Ø	min	
53972K/1	**B / X42**	**392**	**530**	**33,4**	**A) 47**	**49 45 48**	**73 73**
	P265GH	**348**	**515**	**28,0**	**B) 33**	**32 38 30**	
53972K/2	**B / X42**	**378**	**521**	**31,8**	**A) 43**	**42 39 47**	**"**
	P265GH	**337**	**497**	**23,0**	**B) 33**	**32 38 30**	

Z99

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	**11,5 / 5**
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT - in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X			

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2011, ISO 45001:2018.

22HRC=99HRBmax. **Residual magnetic field [mT] max.3 - satisfactory**
QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
Fine grain with size min. 6 according to ASTM E112 – guarantee. **L0= 5.65 X $\sqrt{SO}$ guarantee without testing.**
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1. **MANUFACTURER OF BILLETS: LIBERTY OSTRAVA**

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **6.3.2023/KA**

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

Tel.:+420 595683644
LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

2491/ 3402

Approved by QUALITY1 on 07/03/23

产品质量证明书

无锡华贝钢管制造有限公司

Wuxi SP.Steel Tube Manufacturing Co. LTD

地址：中国江苏省无锡市新吴区硕放南开路90号

ADD: No.90 Nankai Road , Shuofang , New Wu District , Wuxi City , Jiangsu Province , P.R.China

TEL:(0510)85262870 FAX:(0510)85262689

MILL TEST CERTIFICATE

EN 10204 3.2

合同号 Cont. No.	UHY-TAL-03-04	产品名称 Product	SMLS CARBON STEEL PIPE	制造方法 Process	HOT-EXPANDED		
收货单位 Purchaser	T.A.L.SPA TUBI ACCIAIO LOMBARDA CON SOCIO UNICO-OF230217	钢号 Material	B – B/L245 – X42/L290	LC No.	-	质量记录编号 Quality record No.	SP-质-38
产品标准 Product standard	ASTM/ASME A/SA 53/106-19a/API 5L 46ed PSL1	钢级 Steel grade	-	许可证号 Licence No.	TS2710U38-2024	质量证明书号 Inspection certificate No.	20230070290143

总捆数 Total Bundles	24	总支数(PCS) Total Pieces	24	总重量（TON） Total Weight	21.645	总长度(M) Total Length	272.36	交货状态 Delivery Condition	AS-ROLLED	温度℃ Temperature of rolling	780-980℃

序号 No.	炉号 Heat No.	批号 Lot No.	规格 Size(mm) OD ×WT×LENGHT mm	捆数 Bundles	支数 PCS	重量(Ton) Weight	长度(M) Length	金相 Metallographic testing 非金属夹杂物 Nonmetallic inclusions A细fine/ A粗Coarse	B细fine/ B粗Coarse	C细fine/ C粗Coarse	D细fine/ D粗Coarse	Ds	晶粒度 Grain Size ASTM E112	显微组织 Micro Structure	总脱碳层（mm） Decarburized 外（out）	内（in）	压扁 Flattening Test	弯曲 Bending Test
								粗系Coarse≤1.5级，细系fine≤2.0级										
1	8405350T	23041002	406.4*7.92*11000-11800	24	24	21.645	11-11.8	-	-	-	-	-	≥8	-	--	-- -- --	合格 pass	--

化学成分 Chemical Composition (%)

序号 No.	类别 Type	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	V	Ti	Nb	B	CEV
		≤ 0.20	0.15 ~ 0.35	≤ 1.3	≤ 0.020	≤ 0.010	≤ 0.30	≤ 0.40	≤ 0.12	≤ 0.30	0.015 ~ 0.06	≤ 0.07	≤ 0.04	≤ 0.019	-	≤ 0.40
1	H	0.12	0.31	1.19	0.014	0.004	0.010	0.010	0.002	0.010	0.020	0.060	0.002	0.004		0.334
	P	0.13	0.31	1.19	0.012	0.006	0.010	0.010	0.004	0.010	0.030	0.058	0.004	0.004	-	0.344
		0.13	0.30	1.20	0.012	0.007	0.010	0.010	0.004	0.010	0.030	0.058	0.003	0.003		0.346
2	H															
	P															
3	H															
	P															

机械性能 Mechanical Properties

序号 No.	尺寸 Size	标距 mm Gauge	拉伸试验 Tensile Test 屈服强度 ReL R t0.5 (MPa)	抗拉强度 Rm (MPa)	伸长率 A % Elongation	Rt0.5/ Rm ≤ 0.93	冲击试验 Impact Test 冲击功 Impact value Direction*Size*Temperature 方向*尺寸*温度：L-C5-（-15℃） AVG≥40，single≥27J 1	2	3	AVG	剪切面积 (%) Shear area ratio ≥ 1	2	3	硬度试验 Hardness Test 硬度值（HB） Hardness value Single≤ 238, AVG≤238 1	2	3	AVG
1	A1	70	≥290	≥415	≥26.5	0.71	43	57	66	55.33	-	-	-	148	149	150	149
2														-	-	-	-
3														-	-	-	-

注释 Notes *1：纵向条状Longitudinal Strip: A1=19.05mm,A2=25.4mm,A3=38.10mm； *2：纵向棒状Longitudinal Round Bar:B1=6.25mm,B2=8.75mm,B3=12.5mm；*3：F=全截面Full section； *4：纵向 Longitudinal(L) 横向Transverse (T)
*5：C1=2.5×10×55mm，C2=3.3×10×55mm，C3=5×10×55mm，C4=6.7×10×55mm,C5=7.5×10×55mm,C6=10×10×55mm； *6:P=成品成分Product analyses H=熔炼成分Heat analyses

表面&尺寸 Surface&Dimension	直度/椭圆度 Straightness/Ovality	涡流逐支探伤 ET each pipe (ASTM E309)	超声逐支探伤 UT each pipe (ASTM E213 Notch 12.5%)	测厚 WT	涂层 coating	逐支静水压试验 Hydrostatic Test (each pipe)	逐支通径 drift test (each pipe)
合格 pass	合格 pass	合格 pass	合格 pass	-	-	9.6Mpa/10s	-

Remarks

1. All pipes meet the requirements of above mentioned standards in latest editions specified in the order.
2. WUXI SP. has a specific reviewed quality system for material according to Art. 4.3 and 7.5 , Annex I of the Directive PED 2014/68/EU – AD 2000 -W0 issued by TUV NORD GMBH.
3. WUXI SP. Is certified according to ISO 9001 – 2015 by TUV nord.
4. All pipes are free from radioisotopic activity - Residual magnetism 30 gauss max.
5. Fully killed and fine grain >= 8 as per ASTM E112
6. Hardness test according to NACE MR01.75/01.03 – ISO 15156-2 max 22 HRC/ASME II PartA-2021/Dim as ASME B36.10

CE 0045-CPR-2145

制表人 Lister	马小英	审核人 Examiner	严雪荣	签发人 Issue	伍柱华 Issue	质量部门盖章有效 Quality Department's Stamp	复印无效 Copying invalid	日期 Date	2023/7/9

Approved by QUALITY1 on 23/08/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

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Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 381Pcs/Pz			Nominal We
ø .840" O.D., ø 1/2" N.D. x .147" W ø 21.30mm O.D. x 3.73mm W.T.		19.685 ft Fixed Lg 6000 mm Fixed Lg	7500,00 ft 2286 mt		8611,2 lb 3906 kg	0 lb/ft Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031318799 / 000020 Shipping note: 0103386333 - 04/03/2022 Address: VIA ANTONIO MEUCCI 15	Town: 29013 Carpaneto Piacentino Country: Italy

TENSILE TEST / PROVA DI TRAZIONE

Heat N° / Colata N°	Sample N° / Prova N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. OffSet 0.2% Min. / Max:	U.T.S. Req. Min. / Max:	Y.S./U.T.S Req. Max.	Elongation / Allungamento			
		Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area / Area					Lo	Min.	Min.	Obt.
						mm	mm2	°C	MPa	MPa		cal.	mm	%	%
715489	C5046/L	B	AM	Ss	L	3,69 x 21,38	205,10	+20	330,00	476,00	0,69	2"	50,0	25,0%	37,0%

AM: As manufactured / Come fabbricato	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Ss: Strip
B: Body / Corpo	Max: Maximum / Massimo	Req. Max: Required maximum / Massimo richiesto	U.T.S: Ul
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req: Required / Richiesto	Y.S: Yiel
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta	

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Approved by QUALITY1 on 10/08/22

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Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE		Surface / Su See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2		Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3	Ends / Estre SQUARE C LISCI ALL
Dimensions / Dimensioni: ø .840" O.D., ø 1/2" N.D. x .147" W. ø 21.30mm O.D. x 3.73mm W.T.	Schedule / Schedula:	Length / Lunghezza: 19.685 ft Fixed Lg 6000 mm Fixed Lg	Quantity / Quantità: 381Pcs/Pz 7500,00 ft 8611,2 lb 2286 mt 3906 kg	Nominal We 0 lb/ft Kg/m

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

			Composition % / Composizione %																		
			X 100										X 1000						X 10000		
			C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	F2	F3	P	S	Al	Ti	Nb	V	N	B	Ca
		H Max	20	120	25	40	40	15	40	40	3	100	15	25	10	35	20	–	80	120	10	60
		Min	–	29	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Heat N°	Sample N°	P Max	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Colata N°	Prova N°	Min	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
715469		H	12	92	19	14	12	4	15	33	0,4	45,3	0,6	14	6	24	2	1	3	66	2	22
715469	C5046/L	P	11	92	20	12	11	4	14	31	0,4	41,3	0,6	14	5	27	2	1	3	74	3	11
715469	C5047/L	P	11	92	20	12	11	4	14	31	0,4	41,3	0,6	14	5	27	2	1	3	68	2	12

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 F2: (V +Ni+Cr+Mo+Cu)
F1: (Nb+V) F3: (Nb+V +Ti)
H: Heat / Colata
Max: Maximum / Massimo
Min: Minim
P: Produc

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: ISOV			Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:			Temp: - 10	Unit/Unità: °C	Ind.Min.Req: 5		Req.Min.Avg: 7		
Heat N°	Sample N°	Zone			Size / Dimension	Results / Risultato			
Colata N°	Prova N°	Zona	Ls	Sc	mm	1	2	3	Avg.
715489	C5047/L	outside	B	AM	10 x 2.50	31.0	30.0	33.0	31.0

AM: As manufactured / Come fabbricato
Avg: Average / Media
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
Ls: Location of sample / Ubicazione provetta
Req. Min. Avg: Required minimum average / Minima
Sc: Speci
Temp: Te

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22-1

Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	Surface / Su See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2	Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3	Ends / Estre SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 381Pcs/Pz	Nominal We
ø .840" O.D., ø 1/2" N.D. x .147" W. ø 21.30mm O.D. x 3.73mm W.T.		19.685 ft Fixed Lg 6000 mm Fixed Lg	7500,00 ft 8611,2 lb 2286 mt 3906 kg	0 lb/ft Kg/m

IMPACT TEST / PROVA DI RESILIENZA

B: Body / Corpo L: Longitudinal / Longitudinale media richiesta

BENDING / PROVA DI PIEGATURA

Standard / Norma:

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito
715489	C5046/L	E1	AM	1 pipe of the lot	Good /Buono

AM: As manufactured / Come fabbricato E1 / E2: Ends of Sampling / Estremità della provetta Sc: Speci

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Approved by QUALITY1 on 10/08/22

PRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

		22-1		6990191/0
Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE		Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE		Surface / Su See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2			Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3	Ends / Estre SQUARE C LISCI ALL
Dimensions / Dimensioni: ø .840" O.D., ø 1/2" N.D. x .147" W ø 21.30mm O.D. x 3.73mm W.T.	Schedule / Schedula:	Length / Lunghezza: 19.685 ft Fixed Lg 6000 mm Fixed Lg	Quantity / Quantità: 381Pcs/Pz 7500,00 ft 8611,2 lb 2286 mt 3906 kg	Nominal We 0 lb/ft Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità	Value / Valore	Seconds / Secondi	
MPa	20,5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:46^ Revision year:.... Standard:ASTM A 53/ASME SA 53 Year:2018 Revision:2021 Revision year:.... Standard:ASTM A 106 Year:2019 Standard:ASME BPVC SEC II PART A ASME SA 106/530 Year:2021 Standard:NACE MR0175/ISO 15156 Year:2015 Standard:NACE MR0103/ISO 17945 Year:2015	Norma:API 5L Anno:2018 Revisione:46^ Anno della revisi Norma:ASTM A 53/ASME SA 53 Anno:2018 Revisione:2021 An Norma:ASTM A 106 Anno:2019 Norma:ASME BPVC SEC II PART A ASME SA 106/530 Anno:2021 Norma:NACE MR0175/ISO 15156 Anno:2015 Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Surface' HOT GALVANIZED ACC. TO ASTM A 53 Note 2 is the full description of the 'Standard or specification' ACC. TO THE NORM API 5L PSL1 46TH ED., ASTM/ASME A/SA 106/53, SPEC TSP00404/5, PED, NACE MR0175/ISO 15156, NACE MR0103/ISO 17495 Note 3 is the full description of the 'Steel grade'	La nota 1 è la descrizione completa della 'Superficie' ZINCATI A CALDO SECONDO NORMA ASTM A 53 - NON USARE, RIPET DEFO La nota 2 è la descrizione completa delle 'Norme o specifiche' NORMA API 5L PSL1 46A EDIZ., ASTM/ASME A/SA 106/53, SPEC TSP004 15156, NACE MR0103/ISO 17495 La nota 3 è la descrizione completa nel 'Grado acciaio'

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Approved by QUALITY1 on 10/08/22

PRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

	22-1			6990191/0
Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE			Surface / Su See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2		Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3		Ends / Estre SQUARE C LISCI ALL
Dimensions / Dimensioni: ø .840" O.D., ø 1/2" N.D. x .147" W. ø 21.30mm O.D. x 3.73mm W.T.	Schedule / Schedula:	Length / Lunghezza: 19.685 ft Fixed Lg 6000 mm Fixed Lg	Quantity / Quantità: 381Pcs/Pz 7500,00 ft 8611,2 lb 2286 mt 3906 kg	Nominal We 0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
STEEL GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106	ACCIAIO GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106

Supplementary information Informazioni supplementari	
NONDESTRUCTIVE TEST-EDDY CURRENT ACC. TO ASTM A 106, HOLE DIAMETER	TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EDDY CURRENT ,
1 mm max.:WITHOUT OBJECTIONS	IN ACCORDO ALLA ASTM A 106, DIAMETRO DEL FORO 1 mm max.,
NONDESTRUCTIVE TEST - EMI ACC. TO ASTM E 570: WITHOUT OBJECTIONS	CON ESITO SODDISFACENTE
AFTER EMI INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF	I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EMI ,
MATERIAL ACCORDING TO ASME II PART.D TABELLA Y1	IN ACCORDO ALLA ASTM E 570 , CON ESITO SODDISFACENTE
MATERIAL ACCORDING TO PED 2014/68/EU, ANNEX I, Paragrapo 4.3	DOPO IL CONTROLLO EMI, LE ESTREMITA NON TESTATE SONO STATE TAGL
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	MATERIALE CONFORME ALLA ASME II PART.D TABELLA Y1
IS GUARANTEED, WITHOUT PERFORMING THE TEST	MATERIALE CONFORME ALLA PED 2014/68/EU, ANNEX I, Paragraph 4.3
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA MIN.27 J
IS GUARANTEED, WITHOUT PERFORMING THE TEST	SENZA ESECUZIONE DELLA PROVA
HEAT TREATMENT: NORMALIZING FORMING	
NORMALIZING FORMING	
"Pipes have been hot finished in a range	
of temperature over 780°C."	
"Conformity to ASME Sect.II Part A and	
ASME Sect. II Part D table Y-1"	
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO E

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	22-1			6990191/0
Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE		Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE		Surface / S See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2			Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3	Ends / Estr SQUARE LISCI ALL
Dimensions / Dimensioni: ø .840" O.D., ø 1/2" N.D. x .147" W ø 21.30mm O.D. x 3.73mm W.T.	Schedule / Schedula:	Length / Lunghezza: 19.685 ft Fixed Lg 6000 mm Fixed Lg	Quantity / Quantità: 381Pcs/Pz 7500,00 ft 8611,2 lb 2286 mt 3906 kg	Nominal We 0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information Informazioni supplementari	
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. MANUFACTURED BY TENARIS DALMINE NO WELD REPAIR, MERCURY AND RADIATION FREE Tenaris IT identification number for MTC: 59-9o96*	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE. FABBRICATO DA TENARIS DALMINE NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIO Numero Identificativo Tenaris IT per MTC: 59-9o96*

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements.
This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Il prodotto qui certificato è stato fabbricato, provato, testato e controllato conforme ai requisiti. Questo certificato non è una dichiarazione d'origine e

	CUSTOMER . THIRD PARTY	TENARIS QUALITY DEPARTM
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' CARMIGNANI Matteo

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Approved by QUALITY1 on 10/08/22

REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

	22/18		6990193/0
Manufacture Process / Processo di fabbricazione: NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	Product Type / Tipo di prodotto: SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE		Surface / Su See note Vedi nota
Standard or Specification / Norme o specifica: See note nr.2 Vedi nota nr.2		Steel Grade / Grado dell'Acciaio: See note nr.3 Vedi nota nr.3	Ends / Estre SQUARE C LISCI ALL
Dimensions / Dimensioni: ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	Schedule / Schedule: -	Length / Lunghezza: 19.685 ft Fixed Lg 6000 mm Fixed Lg	Quantity / Quantità: 480Pcs/Pz 9448,82 ft 14887,8 lb 2880 mt 6753 kg	Nominal We 0 lb/ft Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031325639 / 000030 Shipping note: 0103579102 - 05/05/2022 Address: VIA ANTONIO MEUCCI 15	Town: 29013 Carpaneto Piacentino Country: Italy

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prove N°	Specimen condition Condizioni della provetta Ls	Sc	Type Tipo	Ori	Specimen dimensions Dimensioni della provetta Size Dimensioni	Area Area	Test temp Temp. di prova	Y.S. OffSet 0.2% Min: 290.00 Max: --	U.T.S. Req. Min: 415.00 Max: --	Y.S./U.T.S Req. Max. 0.85	Elongation / Allungamento Lo	Min.	Min.	Obt.
						mm	mm2	°C	MPa	MPa		cal.	mm	%	%
715497	C5060/L	B	AM	Ss	L	3.65 x 26.95	267.20	+20	349.00	500.00	0.70	2"	50.0	26.0%	45.0%

AM: As manufactured / Come fabbricato
B: Body / Corpo
L: Longitudinal / Longitudinale
Lo: Initial length / Lunghezza iniziale
Ls: Location of sample / Ubicazione provetta
Max: Maximum / Massimo
Min: Minimum / Minimo
Obt: Obtained / Ottenuto
Ori: Orientation / Orientamento
Req. Max: Required maximum / Massimo richiesto
Req: Required / Richiesto
Sc: Specimen condition / Condizioni Provetta
Ss: Strip
U.T.S: Ul
Y.S: Yiel

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PRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufactur
	22/18		6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / S
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estr
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedule:	Length / Lunghezza:	Quantity / Quantita: 480Pcs/Pz	Nominal We
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.		19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

			Composition % / Composizione %																		
			X 100										X 1000						X 10000		
			C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	F2	F3	P	S	Al	Ti	Nb	V	N	B	Ca
		H Max	20	120	25	40	40	15	40	40	3	100	15	25	10	35	20	–	80	120	10	60
		Min	–	29	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Heat N°	Sample N°	P Max	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Colata N°	Prova N°	Min	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
715487		H	11	89	19	13	11	3	17	31	0.4	44.3	0.6	12	3	26	2	1	3	74	2	19
715487	C5060/L	P	11	90	20	11	10	3	17	31	0.4	41.3	0.6	13	3	29	2	1	3	68	3	10
715487	C5061/L	P	10	90	20	11	10	3	17	30	0.4	41.3	0.6	12	3	28	2	1	3	58	3	10

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 F2: (V +Ni+Cr+Mo+Cu) H: Heat / Colata Min: Mini

F1: (Nb+V) F3: (Nb+V +Ti) Max: Maximum / Massimo P: Produ

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: ISOV			Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:			Temp: - 10	Unit/Unità: °C	Ind.Min.Req: 5		Req.Min.Avg: 7		
Heat N°	Sample N°	Zone			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Ls	Sc	mm	1	2	3	Avg.
715487	C5061/L	outside	B	AM	10 x 2.50	31.0	29.0	33.0	31.0

AM: As manufactured / Come fabbricato Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto Ls: Location of sample / Ubicazione provetta Sc: Spec

Avg: Average / Media Req. Min. Avg: Required minimum average / Minima Temp: Te

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Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacture
	22/18		6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Scheduta:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal Wei
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.		19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

IMPACT TEST / PROVA DI RESILIENZA

B: Body / Corpo L: Longitudinal / Longitudinale media richiesta

BENDING / PROVA DI PIEGATURA

Standard / Norma:

Heat N° Colata N°	Sample N° Prova N°	Zone Zona	Sc	Test Frequency Frequenza prova	Result Esito
715487	C5060/L	E1	AM	1 pipe of the lot	Good /Buono

AM: As manufactured / Come fabbricato E1 / E2: Ends of Sampling / Estremità della provetta Sc: Specin

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ODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacture
	22/18		6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedule:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal We
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	.	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità	Value / Valore	Seconds / Secondi	
MPa	20.5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

STANDARD EDITIONS
EDIZIONI NORME

Standard:API 5L Year:2018 Revision:46° Revision year:....	Norma:API 5L Anno:2018 Revisione:46° Anno della revisi
Standard:ASTM A 53/ASME SA 53 Year:2018 Revision:2021 Revision year:....	Norma:ASTM A 53/ASME SA 53 Anno:2018 Revisione:2021 An
Standard:ASTM A 106 Year:2019	Norma:ASTM A 106 Anno:2019
Standard:ASME BPVC SEC II PART A ASME SA 106/530 Year:2021	Norma:ASME BPVC SEC II PART A ASME SA 106/530 Anno:2021
Standard:NACE MR0175/ISO 15156 Year:2015	Norma:NACE MR0175/ISO 15156 Anno:2015
Standard:NACE MR0103/ISO 17945 Year:2015	Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES
NOTE DI DESCRIZIONE DEL PRODOTTO

Note 1 is the full description of the 'Surface'	La nota 1 è la descrizione completa della 'Superficie'
HOT GALVANIZED ACC. TO ASTM A 53	ZINCATI A CALDO SECONDO NORMA ASTM A 53 - NON USARE, RIFET DERO
Note 2 is the full description of the 'Standard or specification'	La nota 2 è la descrizione completa delle 'Norme o specifiche'
ACC. TO THE NORM API 5L PSL1 46TH ED., ASTM/ASME A/SA 106/53, SPEC TSP00404/5, PED, NACE MR0175/ISO 15156, NACE MR0103/ISO 17495	NORMA API 5L PSL1 46A EDIS., ASTM/ASME A/SA 106/53, SPEC TSP004 15156, NACE MR0103/ISO 17495
Note 3 is the full description of the 'Steel grade'	La nota 3 è la descrizione completa del 'Grado acciaio'

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PRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Customer / Cliente: COMTUBI GTP SH			6990193/00
	22/18		

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estrer
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz		Nominal Weig
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	- -	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 2880 mt	14887,8 lb 6753 kg	0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
STEEL GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106	ACCIAIO GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106

Supplementary Information Informazioni supplementari	
NONDESTRUCTIVE TEST-EDDY CURRENT ACC. TO ASTM A 106. HOLE DIAMETER 1 mm max.:WITHOUT OBJECTIONS NONDESTRUCTIVE TEST - EMI ACC. TO ASTM E 570: WITHOUT OBJECTIONS AFTER EMI INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF MATERIAL ACCORDING TO ASME II PART.D TABELLA Y1 MATERIAL ACCORDING TO PED 2014/68/EU, ANNEX I, Paragraph 4.3 WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C IS GUARANTEED, WITHOUT PERFORMING THE TEST WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C IS GUARANTEED, WITHOUT PERFORMING THE TEST HEAT TREATMENT: NORMALIZING FORMING NORMALIZING FORMING "Pipes have been hot finished in a range of temperature over 780xC." "Conformity to ASME Sect.II Part A and ASME Sect. II Part D table Y-1" STEEL IS PRODUCED BY EAF SEAMLESS HOT FINISHED PIPES VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EDDY CURRENT , IN ACCORDO ALLA ASTM A 106, DIAMETRO DEL FORO 1 mm max., CON ESITO SODDISFACENTE I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EMI , IN ACCORDO ALLA ASTM E 570 , CON ESITO SODDISFACENTE DOPO IL CONTROLLO EMI, LE ESTREMITA NON TESTATE SONO STATE TAGL MATERIALE CONFORME ALLA ASME II PART.D TABELLA Y1 MATERIALE CONFORME ALLA PED 2014/68/EU, ANNEX I, Paragraph 4.3 TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA MIN.27 J SENZA ESECUZIONE DELLA PROVA TUBI SENZA SALDATURA FINITI A CALDO IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE

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ODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - It: 22/18	Customer's Reference / Posizione Cliente:	Manufacturer 6990193/00

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal Wei
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.		19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information Informazioni supplementari	
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. MANUFACTURED BY TENARIS DALMINE NO WELD REPAIR, MERCURY AND RADIACTION FREE Tenaris IT identification number for MTC: 592]B>op	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO E IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE. FABBRICATO DA TENARIS DALMINE NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZION Numero Identificativo Tenaris IT per MTC: 592]B>op

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.	Il prodotto qui certificato è stato fabbricato, provato, testato e controllato in conforme ai requisiti. Questo certificato non è una dichiarazione d'origine e

	CUSTOMER , THIRD PARTY	TENARIS QUALITY DEPARTMI
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' CARMIGNANI Matteo

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Approved by QUALITY1 on 10/08/22

Customer / Cliente: COMTUBI STP SH	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacture
	22/18		6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal We
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	. .	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes Avvisi di spedizione	Delivery Notes Avvisi di spedizione
Job Number: 0031325639 / 000030 Shipping note: 0103579102 - 05/05/2022 Address: VIA ANTONIO MEUCCI 15	Town: 29013 Carpaneto Piacentino Country: Italy

TENSILE TEST / PROVA DI TRAZIONE

Heat N° Colata N°	Sample N° Prova N°	Specimen condition Condizioni della provetta				Specimen dimensions Dimensioni della provetta		Test temp	Y.S. OffSet 0.2%	U.T.S. Req.	Y.S./U.T.S	Elongation / Allungamento			
		Ls	Sc	Type Tipo	Ori	Size Dimensioni	Area Area	Temp. di prova	Min: 290.00 Max: --	Min: 415.00 Max: --	Req. Max. 0.85	Lo	Min.	Min.	Obt.
						mm	mm2	°C	MPa	MPa		cal.	mm	%	%
715487	C5060/L	B	AM	Ss	L	3.65 x 26.95	267.20	+20	349.00	500.00	0.70	2"	50.0	26.0%	45.0%

AM: As manufactured / Come fabbricato	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Ss: Strip s
B: Body / Corpo	Max: Maximum / Massimo	Req. Max: Required maximum / Massimo richiesto	U.T.S: Ulti
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req: Required / Richiesto	Y.S: Yield
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta	

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Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - It: 22/18	Customer's Reference / Posizione Cliente: .	Manufacture: 6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / S
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal We
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	. .	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

			Composition % / Composizione %																		
			X 100										X 1000						X 10000		
			C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	F2	F3	P	S	Al	Ti	Nb	V	N	B	Ca
		H Max	20	120	25	40	40	15	40	40	3	100	15	25	10	35	20	--	80	120	10	60
		Min	--	29	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Heat N°	Sample N°	P Max	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Colata N°	Prova N°	Min	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
715487		H	11	89	19	13	11	3	17	31	0.4	44.3	0.6	12	3	26	2	1	3	74	2	19
715487	C5060/L	P	11	90	20	11	10	3	17	31	0.4	41,3	0.6	13	3	29	2	1	3	68	3	10
715487	C5061/L	P	10	90	20	11	10	3	17	30	0.4	41.3	0.6	12	3	28	2	1	3	68	3	10

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15	F2: (V +Ni+Cr+Mo+Cu)	H: Heat / Colata	Min: Minir
F1: (Nb+V)	F3: (Nb+V +Ti)	Max: Maximum / Massimo	P: Produc

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: ISOV			Orientation/Direzione: L		Unit / Unità: JOULE				
Position/Posizione:			Temp: - 10		Unit/Unità: °C	Ind.Min.Req: 5		Req.Min.Avg: 7	
Heat N°	Sample N°	Zone			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Ls	Sc	mm	1	2	3	Avg.
715487	C5061/L	outside	B	AM	10 x 2.50	31.0	29.0	33.0	31.0

AM: As manufactured / Come fabbricato	Ind. Min. Req: Individual Minimum Required /	Ls: Location of sample / Ubicazione provetta	Sc: Speci
Avg: Average / Media	Minimo singolo richiesto	Req. Min. Avg: Required minimum average / Minima	Temp: Te

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Customer / Cliente: COMTUBI GTP SH	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente:	Manufacture
	22/18		6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz		Nominal Wei
ø 3/4" N.D.	.	19.685 ft Fixed Lg	9448,82 ft	14887,8 lb	0 lb/ft
ø 26.70mm O.D. x 3.91mm W.T.	.	6000 mm Fixed Lg	2880 mt	6753 kg	Kg/m

IMPACT TEST / PROVA DI RESILIENZA

B: Body / Corpo | L: Longitudinal / Longitudinale | media richiesta

BENDING / PROVA DI PIEGATURA

Standard / Norma:

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito
715487	C5060/L	E1	AM	1 pipe of the lot	Good /Buono

AM: As manufactured / Come fabbricato | E1 / E2: Ends of Sampling / Estremità della provetta | Sc: Specin

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Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - I	Customer's Reference / Posizione Cliente	Manufacture
	22/18	.	6990193/0

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal Wei
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	. .	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	20.5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:46^ Revision year:....	Norma:API 5L Anno:2018 Revisione:46^ Anno della revisi
Standard:ASTM A 53/ASME SA 53 Year:2018 Revision:2021 Revision year:....	Norma:ASTM A 53/ASME SA 53 Anno:2018 Revisione:2021 An
Standard:ASTM A 106 Year:2019	Norma:ASTM A 106 Anno:2019
Standard:ASME BPVC SEC II PART A ASME SA 106/530 Year:2021	Norma:ASME BPVC SEC II PART A ASME SA 106/530 Anno:2021
Standard:NACE MR0175/ISO 15156 Year:2015	Norma:NACE MR0175/ISO 15156 Anno:2015
Standard:NACE MR0103/ISO 17945 Year:2015	Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Surface'	La nota 1 è la descrizione completa della 'Superficie'
HOT GALVANIZED ACC. TO ASTM A 53	ZINCATI A CALDO SECONDO NORMA ASTM A 53 - NON USARE, RIPET DERO
Note 2 is the full description of the 'Standard or specification'	La nota 2 è la descrizione completa delle 'Norme o specifiche'
ACC. TO THE NORM API 5L PSL1 46TH ED., ASTM/ASME A/SA 106/53, SPEC TSP00404/5, PED, NACE MR0175/ISO 15156, NACE MR0103/ISO 17495	NORMA API 5L PSL1 46A EDIZ., ASTM/ASME A/SA 106/53, SPEC TSP004 15156, NACE MR0103/ISO 17495
Note 3 is the full description of the 'Steel grade'	La nota 3 è la descrizione completa del 'Grado acciaio'

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Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - It: 22/18	Customer's Reference / Posizione Cliente: .	Manufacturer 6990193/00

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note r Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estrer
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALLE

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal Weig
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	. .	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
STEEL GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106	ACCIAIO GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106

Supplementary Information Informazioni supplementari	
NONDESTRUCTIVE TEST-EDDY CURRENT ACC. TO ASTM A 106, HOLE DIAMETER 1 mm max.:WITHOUT OBJECTIONS	TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EDDY CURRENT , IN ACCORDO ALLA ASTM A 106, DIAMETRO DEL FORO 1 mm max.,
NONDESTRUCTIVE TEST - EMI ACC. TO ASTM E 570: WITHOUT OBJECTIONS	CON ESITO SODDISFACENTE
AFTER EMI INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF	I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EMI ,
MATERIAL ACCORDING TO ASME II PART.D TABELLA Y1	IN ACCORDO ALLA ASTM E 570 , CON ESITO SODDISFACENTE
MATERIAL ACCORDING TO PED 2014/68/EU, ANNEX I, Paragraph 4.3	DOPO IL CONTROLLO EMI, LE ESTREMITA NON TESTATE SONO STATE TAGL
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	MATERIALE CONFORME ALLA ASME II PART.D TABELLA Y1
IS GUARANTEED, WITHOUT PERFORMING THE TEST	MATERIALE CONFORME ALLA PED 2014/68/EU, ANNEX I, Paragraph 4.3
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA MIN.27 J
IS GUARANTEED, WITHOUT PERFORMING THE TEST	SENZA ESECUZIONE DELLA PROVA
HEAT TREATMENT: NORMALIZING FORMING	
NORMALIZING FORMING	
"Pipes have been hot finished in a range	
of temperature over 780rC."	
"Conformity to ASME Sect.II Part A and	
ASME Sect. II Part D table Y-1"	
STEEL IS PRODUCED BY EAF	
SEAMLESS HOT FINISHED PIPES	TUBI SENZA SALDATURA FINITI A CALDO
VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT	IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE

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Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

Customer / Cliente: COMTUBI GTP Srl	Customer's Order Item / Rifer. Ordine Cliente - It: 22/18	Customer's Reference / Posizione Cliente:	Manufacturer 6990193/00

Manufacture Process / Processo di fabbricazione:	Product Type / Tipo di prodotto:	Surface / Su
NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE	SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE	See note Vedi nota

Standard or Specification / Norme o specifica:	Steel Grade / Grado dell'Acciaio:	Ends / Estre
See note nr.2 Vedi nota nr.2	See note nr.3 Vedi nota nr.3	SQUARE C LISCI ALL

Dimensions / Dimensioni:	Schedule / Schedula:	Length / Lunghezza:	Quantity / Quantità: 480Pcs/Pz	Nominal Wei
ø 3/4" N.D. ø 26.70mm O.D. x 3.91mm W.T.	.	19.685 ft Fixed Lg 6000 mm Fixed Lg	9448,82 ft 14887,8 lb 2880 mt 6753 kg	0 lb/ft Kg/m

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information Informazioni supplementari	
STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE	L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO E
THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER.	IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE.
MANUFACTURED BY TENARIS DALMINE	FABBRICATO DA TENARIS DALMINE
NO WELD REPAIR, MERCURY AND RADIATION FREE	NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZION
Tenaris IT identification number for MTC: 592}B>op	Numero Identificativo Tenaris IT per MTC: 592}B>op

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.	Il prodotto qui certificato è stato fabbricato, provato, testato e controllato in conforme ai requisiti. Questo certificato non è una dichiarazione d'origine e

	CUSTOMER . THIRD PARTY	TENARIS QUALITY DEPARTM
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' CARMIGNANI Matteo

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ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 9 MT 54,54 HEAT 712777 DIMENSIONS 33,4 x 4,55

Tenaris

Dalmine SPA - Piombino Plant
Loc. Ischia di Crociano
57025 Piombino (LI) - Italy

+ 39 0565 278 111 tel
+ 39 0565 276 057 fax

INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **06-21-21427** | Page / Pagina: **1 / 6**

Date / Data: **October 25, 2021**

Customer / Cliente: **COMTUBI S.r.l-**	Customer's Order Item / Rifer. Ordine Cliente - I: **21/36**	Customer's Reference / Posizione Cliente: .	Manufacturer's Works Order N° / Conferma-Posizione: **6990195/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING** **FORMATI A TEMP.DI NORMALIZZAZIONE**	Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES** **TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1** **Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **See note nr.3** **Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT** **LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D.** **ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg** **6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft** **Kg/m**

DELIVERY NOTES / AVVISI DI SPEDIZIONE

Delivery Notes / Avvisi di spedizione	Delivery Notes / Avvisi di spedizione
Job Number: 0031302564 / 000020 Shipping note: 0103018518 - 25/10/2021 Address: Via Antonio Meucci 15	Town: 29013 Carpaneto Piacentino Country: Italy

TENSILE TEST / PROVA DI TRAZIONE

Heat N° / Colata N°	Sample N° / Prova N°	Specimen condition / Condizioni della provetta				Specimen dimensions / Dimensioni della provetta		Test temp / Temp. di prova	Y.S. OffSet 0.2% Min: **290.00** Max: --	U.T.S. Req. Min: **415.00** Max: --	Y.S./U.T.S Req. Max. **0.85**	Elongation / Allungamento			
		Ls	Sc	Type / Tipo	Ori	Size / Dimensioni	Area / Area					Lo	Min.	Min.	Obt.
						mm	mm2	°C	MPa	MPa		cal.	mm	%	%
712777	A7866/L	B	AM	Ss	L	4.55 x 33.40	412.40	+20	321.00	468.00	0.69	2"	50.0	29.0%	46.0%
713040	A9066/L	B	AM	Ss	L	4.50 x 33.40	408.60	+20	327.00	481.00	0.68	2"	50.0	28.0%	48.0%
713253	B1300/L	B	AM	Ss	L	4.58 x 33.28	413.00	+20	328.00	480.00	0.68	2"	50.0	29.0%	45.0%
713498	B1299/L	B	AM	Ss	L	4.80 x 33.28	429.50	+20	324.00	476.00	0.68	2"	50.0	29.0%	45.0%

AM: As manufactured / Come fabbricato	Ls: Location of sample / Ubicazione provetta	Ori: Orientation / Orientamento	Ss: Strip specimen / Rettangolare
B: Body / Corpo	Max: Maximum / Massimo	Req. Max: Required maximum / Massimo richiesto	U.T.S: Ultimate Tensile Strength / Rottura
L: Longitudinal / Longitudinale	Min: Minimum / Minimo	Req: Required / Richiesto	Y.S: Yield Strength / Snervamento
Lo: Initial length / Lunghezza iniziale	Obt: Obtained / Ottenuto	Sc: Specimen condition / Condizioni Provetta	

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TAL SPA TUBI ACCIAIO LOMBARDA – PO OF210742 DTD 30/11/2021 - COMTUBI GTP SRL
HEAT 712777 NR. 95 – MT.1938,00 / HEAT 713253 NR. 78 – MT. 472,68
HEAT 713040 NR. 56 – MT. 339,36/ HEAT 713498 NR. 112 – MT. 678,72

Approved by QUALITY2 on 13/01/22

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ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 9 MT 54,54 HEAT 712777 DIMENSIONS 33,4 x 4,55

Tenaris

Dalmine SPA - Piombino Plant
Loc. Ischia di Crociano
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+ 39 0565 276 057 fax

INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **06-21-21427** | Page / Pagina: **2 / 6**

Date / Data: **October 25, 2021**

Customer / Cliente: **COMTUBI S.r.l-**	Customer´s Order Item / Rifer. Ordine Cliente - I: **21/36**	Customer´s Reference / Posizione Cliente:	Manufacturer´s Works Order N° / Conferma-Posizione: **6990195/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING** **FORMATI A TEMP.DI NORMALIZZAZIONE**	Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES** **TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1** **Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **See note nr.3** **Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT** **LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D.** **ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg** **6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft** **Kg/m**

CHEMICAL COMPOSITION / COMPOSIZIONE CHIMICA

			Composition % / Composizione %																		
			X 100										X 1000						X 10000		
			C	Mn	Si	Ni	Cr	Mo	Cu	Ce LF	F1	F2	F3	P	S	Al	Ti	Nb	V	N	B	Ca
		H Max	20	120	25	40	40	15	40	40	3	100	15	25	10	35	20	–	80	120	10	60
		Min	–	29	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Heat N°	Sample N°	P Max	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Colata N°	Prova N°	Min	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
713040		H	13	90	18	9	10	3	17	32	0.2	39.1	0.4	13	3	25	2	1	1	82	1	17
713040	A9066/L	P	13	93	18	9	11	3	19	33	0.3	42.2	0.6	13	2	26	3	1	2	65	3	8
713253		H	12	88	20	9	8	3	16	31	0.2	36.1	0.4	13	4	26	2	1	1	89	2	20
713253	B1300/L	P	12	90	20	9	9	3	17	31	0.4	38.2	0.6	12	3	28	2	2	2	53	4	9
713498		H	12	88	20	10	8	4	18	31	0.2	40.1	0.4	13	2	28	2	1	1	84	1	22
713498	B1299/L	P	12	88	20	10	10	4	19	31	0.5	43.3	0.7	14	3	28	2	2	3	48	3	9

Ce LF: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 | F2: (V +Ni+Cr+Mo+Cu) | H: Heat / Colata | Min: Minimum / Minimo

F1: (Nb+V) | F3: (Nb+V +Ti) | Max: Maximum / Massimo | P: Product / Prodotto

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: **ISOV** | Orientation/Direzione: **L** | Unit / Unità: **JOULE**

Position/Posizione: | Temp: **- 10** Unit/Unità: **°C** | Ind.Min.Req: **5** Req.Min.Avg: **7**

Heat N°	Sample N°	Zone			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Ls	Sc	mm	1	2	3	Avg.
712777	A7866/L	outside	B	AM	10 x 2.50	25.0	28.0	27.0	27.0

Type/Tipo: **ISOV** | Orientation/Direzione: **L** | Unit / Unità: **JOULE**

Position/Posizione: | Temp: **- 10** Unit/Unità: **°C** | Ind.Min.Req: **5** Req.Min.Avg: **7**

Heat N°	Sample N°	Zone			Size / Dimensioni	Results / Risultato			
Colata N°	Prova N°	Zona	Ls	Sc	mm	1	2	3	Avg.
713040	A9066/L	outside	B	AM	10 x 2.50	29.0	30.0	30.0	30.0

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Approved by QUALITY2 on 13/01/22

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N° 9 MT 54,54 HEAT 712777 DIMENSIONS 33,4 x 4,55

Tenaris

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CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero: **06-21-21427** | Page / Pagina: **3 / 6**

Date / Data: **October 25, 2021**

Customer / Cliente: **COMTUBI S.r.l-**	Customer's Order Item / Rifer. Ordine Cliente - I: **21/36**	Customer's Reference / Posizione Cliente: .	Manufacturer's Works Order N° / Conferma-Posizione: **6990195/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING** **FORMATI A TEMP.DI NORMALIZZAZIONE**	Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES** **TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1** **Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **See note nr.3** **Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT** **LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D.** **ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg** **6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft** **Kg/m**

IMPACT TEST / PROVA DI RESILIENZA

Type/Tipo: **ISOV** | Orientation/Direzione: **L** | Unit / Unità: **JOULE**
Position/Posizione: | Temp: **- 10** Unit/Unità: **°C** | Ind.Min.Req: **5** Req.Min.Avg: **7**

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
713253	B1300/L	outside	B	AM	10 x 2.50	31.0	30.0	29.0	30.0

Type/Tipo: **ISOV** | Orientation/Direzione: **L** | Unit / Unità: **JOULE**
Position/Posizione: | Temp: **- 10** Unit/Unità: **°C** | Ind.Min.Req: **5** Req.Min.Avg: **7**

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Ls	Sc	Size / Dimensioni mm	Results / Risultato 1	2	3	Avg.
713498	B1299/L	outside	B	AM	10 x 2.50	31.0	32.0	30.0	31.0

AM: As manufactured / Come fabbricato
Avg: Average / Media
B: Body / Corpo
Ind. Min. Req: Individual Minimum Required / Minimo singolo richiesto
L: Longitudinal / Longitudinale
Ls: Location of sample / Ubicazione provetta
Req. Min. Avg: Required minimum average / Minima media richiesta
Sc: Specimen condition / Condizioni Provetta
Temp: Temperature / Temperatura

BENDING / PROVA DI PIEGATURA

Standard / Norma:

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito
712777	A7866/L	E1	AM	1 pipe of the lot	Good /Buono
713040	A9066/L	E1	AM	1 pipe of the lot	Good /Buono

Standard / Norma:

Heat N° / Colata N°	Sample N° / Prova N°	Zone / Zona	Sc	Test Frequency / Frequenza prova	Result / Esito
713498	B1299/L	E1	AM	1 pipe of the lot	Good /Buono
713253	B1300/L	E1	AM	1 pipe of the lot	Good /Buono

AM: As manufactured / Come fabbricato
E1 / E2: Ends of Sampling / Estremità della provetta
Sc: Specimen condition / Condizioni Provetta

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Tenaris

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INSPECTION CERTIFICATE
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Number / Numero:	Page / Pagina:
06-21-21427	**4 / 6**
Date / Data: **October 25, 2021**	

Customer / Cliente: **COMTUBI S.r.l-**		Customer´s Order Item / Rifer. Ordine Cliente - It: **21/36**	Customer´s Reference / Posizione Cliente: .	Manufacturer´s Works Order N° / Conferma-Posizione: **6990195/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING FORMATI A TEMP.DI NORMALIZZAZIONE**		Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1 Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2 Vedi nota nr.2**			Steel Grade / Grado dell'Acciaio: **See note nr.3 Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D. ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg 6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft Kg/m**

HYDROSTATIC TEST / PROVA IDRAULICA

Pressure / Pressione		Time / Tempo	Results / Risultato
Unit / Unità.	Value / Valore	Seconds / Secondi	
MPa	20.5	5	Satisfactory / Soddisfacente

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

STANDARD EDITIONS EDIZIONI NORME	
Standard:API 5L Year:2018 Revision:46^ Revision year:....	Norma:API 5L Anno:2018 Revisione:46^ Anno della revisione:.....
Standard:ASTM A 53/ASME SA 53 Year:2018 Revision:2019 Revision year:....	Norma:ASTM A 53/ASME SA 53 Anno:2018 Revisione:2019 Anno della revisione:.....
Standard:ASTM A 106 Year:2019	Norma:ASTM A 106 Anno:2019
Standard:ASME BPVC SEC II PART A ASME SA 106/530 Year:2019	Norma:ASME BPVC SEC II PART A ASME SA 106/530 Anno:2019
Standard:NACE MR0175/ISO 15156 Year:2015	Norma:NACE MR0175/ISO 15156 Anno:2015
Standard:NACE MR0103/ISO 17945 Year:2015	Norma:NACE MR0103/ISO 17945 Anno:2015

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
Note 1 is the full description of the 'Surface'	La nota 1 è la descrizione completa della 'Superficie'
HOT GALVANIZED ACC. TO ASTM A 53	ZINCATI A CALDO SECONDO NORMA ASTM A 53 - NON USARE, RIPET DEROGA 7 -
Note 2 is the full description of the 'Standard or specification'	La nota 2 è la descrizione completa delle 'Norme o specifiche'
ACC. TO THE NORM API 5L PSL1 46TH ED., ASTM/ASME A/SA 106/53, SPEC TSP00404/5, PED, NACE MR0175/ISO 15156, NACE MR0103/ISO 17495	NORMA API 5L PSL1 46A EDIZ., ASTM/ASME A/SA 106/53, SPEC TSP00404/5, PED, NACE MR0175/ISO 15156, NACE MR0103/ISO 17495
Note 3 is the full description of the 'Steel grade'	La nota 3 è la descrizione completa del 'Grado acciaio'

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N° 9 MT 54,54 HEAT 712777 DIMENSIONS 33,4 x 4,55

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Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING** **FORMATI A TEMP.DI NORMALIZZAZIONE**	Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES** **TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1** **Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**		Steel Grade / Grado dell'Acciaio: **See note nr.3** **Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT** **LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D.** **ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg** **6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft** **Kg/m**

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

PRODUCT DESCRIPTION NOTES NOTE DI DESCRIZIONE DEL PRODOTTO	
STEEL GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106	ACCIAIO GR. X42 PSL1 , GR.B PSL1, GR.B ASTM/ASME A/SA 53/106

Supplementary Information Informazioni supplementari	
HOT GALVANIZING ACC. TO ASTM A123	TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EDDY CURRENT ,
NONDESTRUCTIVE TEST - EMI ACC. TO ASTM E 570: WITHOUT OBJECTIONS	IN ACCORDO ALLA ASTM A 106, DIAMETRO DEL FORO 1.4 mm max.,
AFTER EMI INSPECTION, UNTESTED ENDS HAVE BEEN CUT OFF	CON ESITO SODDISFACENTE
MATERIAL ACCORDING TO ASME II PART.D TABELLA Y1	I TUBI SONO STATI SOTTOPOSTI AL CONTROLLO EMI ,
MATERIAL ACCORDING TO PED 2014/68/EU, ANNEX I, Paragraph 4.3	IN ACCORDO ALLA ASTM E 570 , CON ESITO SODDISFACENTE
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	DOPO IL CONTROLLO EMI, LE ESTREMITA NON TESTATE SONO STATE TAGLIATE.
IS GUARANTEED, WITHOUT PERFORMING THE TEST	MATERIALE CONFORME ALLA ASME II PART.D TABELLA Y1
WE DECLARE THAT THE MINIMAL IMPACT TEST VALUE OF 27 J AT 0°C	MATERIALE CONFORME ALLA PED 2014/68/EU, ANNEX I, Paragraph 4.3
IS GUARANTEED, WITHOUT PERFORMING THE TEST	TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA MIN.27 J A 0°C
We declare that the energy value med.23J min.20J at -49^C	SENZA ESECUZIONE DELLA PROVA
for a full size LONGITUDINAL 10x10 specimen, is quaranteed.	TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA MIN.27 J A 0°C
We declare that the energy value med.23J min.20J at -49^C	SENZA ESECUZIONE DELLA PROVA
for a full size LONGITUDINAL 10x10 specimen, is quaranteed.	We declare that the energy value med.23J min.20J at -49^C
"Pipes have been hot finished in a range	for a full size LONGITUDINAL 10x10 specimen, is quaranteed
of temperature over 780rC."	We declare that the energy value med.23J min.20J at -49^C
"Conformity to ASME Sect.II Part A and	for a full size LONGITUDINAL 10x10 specimen, is quaranteed
ASME Sect. II Part D table Y-1"	TENARIS SILCOTUB GARANTISCE IL VALORE DELLA RESILIENZA
STEEL IS PRODUCED BY EAF	MIN. 27 J A 0°C SENZA ESECUZIONE DELLA PROVA
.	NORMALIZING FORMING

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N° 9 MT 54,54 HEAT 712777 DIMENSIONS 33,4 x 4,55

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+ 39 0565 276 057 fax

INSPECTION CERTIFICATE
CERTIFICATO DI COLLAUDO
(UNI EN 10204 3.1 / ISO 10474 3.1)

Number / Numero:	Page / Pagina:
06-21-21427	**6 / 6**
Date / Data: **October 25, 2021**	

Customer / Cliente: **COMTUBI S.r.l-**		Customer´s Order Item / Rifer. Ordine Cliente - I: **21/36**	Customer´s Reference / Posizione Cliente: .	Manufacturer´s Works Order N° / Conferma-Posizione: **6990195/001**
Manufacture Process / Processo di fabbricazione: **NORMALIZING FORMING** **FORMATI A TEMP.DI NORMALIZZAZIONE**		Product Type / Tipo di prodotto: **SEAMLESS CARBON LINE PIPES** **TUBI S.S. LINE PIPE**		Surface / Superficie: **See note nr.1** **Vedi nota nr.1**
Standard or Specification / Norme o specifica: **See note nr.2** **Vedi nota nr.2**			Steel Grade / Grado dell'Acciaio: **See note nr.3** **Vedi nota nr.3**	Ends / Estremità: **SQUARE CUT** **LISCI ALLE ESTREMITA'**
Dimensions / Dimensioni: **ø 1" N.D.** **ø 33.40mm O.D. x 4.55mm W.T.**	Schedule / Schedula: . .	Length / Lunghezza: **19.685 ft Fixed Lg** **6000 mm Fixed Lg**	Quantity / Quantità: **908Pcs/Pz** **17874,02 ft** **40831,7 lb** **5448 mt** **18521 kg**	Nominal Weight / Peso nominale: **0 lb/ft** **Kg/m**

SUPPLEMENTARY INFORMATION / INFORMAZIONI SUPPLEMENTARIE

Supplementary Information Informazioni supplementari	
. SEAMLESS HOT FINISHED PIPES VISUAL AND DIMENSIONAL CONTROL HAS BEEN CARRIED OUT WITH SATISFACTORY RESULT STEEL IS FULLY KILLED AND PRODUCED BY ELECTRIC FURNACE TO A FINE GRAIN PRACTICE THE PRODUCT SUPPLIED IS IN COMPLIANCE WITH THE REQUIREMENTS OF THE ORDER. MANUFACTURED BY TENARIS DALMINE NO WELD REPAIR, MERCURY AND RADIATION FREE Tenaris IT identification number for MTC: 59"!kd?p	Pipes have been hot finished in a range of temperature over 780rC." TUBI SENZA SALDATURA FINITI A CALDO IL CONTROLLO VISIVO E DIMENSIONALE HA DATO ESITO SODDISFACENTE L'ACCIAIO E' DI TIPO CALMATO, A GRANO FINE, PRODOTTO AL FORNO ELETTRICO IL MATERIALE FORNITO E' IN ACCORDO AI REQUISITI DELL'ORDINE. FABBRICATO DA TENARIS DALMINE NON RIPARATO MEDIANTE SALDATURA, ESENTE DA MERCURIO E RADIAZIONI Numero Identificativo Tenaris IT per MTC: 59"!kd?p

The product certified herein has been manufactured, sampled, tested and inspected in accordance with the stated specifications and has been found to meet the requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.		Il prodotto qui certificato è stato fabbricato, provato, testato e controllato in conformità alle specifiche indicate ed è risultato conforme ai requisiti. Questo certificato non è una dichiarazione d'origine e non può essere utilizzato come tale
	CUSTOMER . THIRD PARTY	**TENARIS QUALITY DEPARTMENT SIGNATURE**
	INSPECTION COMPANY COMPAGNIA D'ISPEZIONE	QUALITY CERTIFICATION DEPT. UFFICIO CERTIFICAZIONE QUALITA' CARMIGNANI Matteo
		CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABILE DELL'UFFICIO CERTIFICAZIONE QUALITA' CARMIGNANI Matteo

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark green colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Questo certificato è emesso da un sistema computerizzato ed è valido con firma elettronica. Il certificato originale riporta il marchio "Tenaris" in colore verde. Il possessore dell'originale, qualora rilasci copia, deve attestarne a suo nome la conformità all'originale, assumendosi ogni responsabilità per usi illeciti o non Qualunque alterazione e/o falsificazione sarà perseguita a norma di legge.

Approved by QUALITY2 on 13/01/22

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo *Number* *Numero* **999/1/2023**

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Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT221942

Číslo položky - Item number - Numero di articolo:
13

Č.obj.prij. - Consignee order No. - Numero dell'ordine del destinatario:
OF220649

Číslo zákazky výrobcu - Manufacturer's works order number - Conferma d'ordine dello stabilimento:
BM 257194/1/1 3313647

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RV933CX RV045YE

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3025619

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3320151

Zákazník/Prijemca. - Customer/Consignee - Committente/Destinatario:

Pipex Italia S.P.A.
Viale Gian Galeazzo 15
20136 Milano
ITALY

IL PRESENTE CERTIFICATO E' VALIDO PER:
CLIENTE TAL JOB: Acciaio Lombardo SPA
ORDINE N° OF220649/IT221942 pos 13
DDT. N° 695 B DEL 17-5-23 Kg. 15616
PIPEX ITALIA SPA

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

GALVANIZED PIPES ASTM A 53

Vonkajší priemer - Outside diameter - Diametro esterno:	**60.320** mm
Hrúbka steny - Wall thickness - Spessore:	**5.540** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**156**
Celková dĺžka - Total length - Lunghezza totale:	**936.00** m
Celková hmotnosť - Total mass - Peso totale:	**7157.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto **v Podbrezovej** *Location* *Localitá* **sna**

Dátum **10.01.2023** *Date* *Data*

Závodný znalec *Works Inspector* *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by MBRONZINI on 23/06/23

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Číslo *Number* *Numero* **999/1/2023**

List č. - *Sheet No.* - *Pagina No.*: **2 / 4**

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell'acciaio*
26329	**156**	**936**	**7157**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium* - *acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Bez úpravy povrchu (neolejované) - *Without surface treatment (without oil)* - *Senza vernice protettiva*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
26329		**0.15**	**0.53**	**0.24**	**0.014**	**0.004**	**0.20**	**0.05**	**0.08**	**0.024**	**0.03**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]	Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
26329		**0.0001**	**0.27**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
26329	**1**	**0.16**	**0.53**	**0.24**	**0.015**	**0.003**	**0.20**	**0.05**	**0.08**	**0.023**	**0.02**	**0.001**	**0.001**	**0.001**
26329	**2**	**0.16**	**0.53**	**0.24**	**0.015**	**0.003**	**0.20**	**0.05**	**0.08**	**0.023**	**0.02**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]
26329	**1**	**0.0001**
26329	**2**	**0.0001**

Miesto **v Podbrezovej** *Location* *Località* **sna**

Dátum **10.01.2023** *Date* *Data*

Závodný znalec *Works Inspector* *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by MBRONZINI on 23/06/23

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EN 10204:2004/3.1

Číslo / *Number* / *Numero*: **999/1/2023**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20 °C**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction Type of the test piece* *Orientamento Tipo della provetta*	Medza kĺzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.					
					max.					
1	**26329**	A067247/22	18.53x5.41	L / V	**382**	**370**	**376**	**488**	**29.3**	**31.0**
					265	240	290	415	23.0	*
					---	---	---	570	---	---

* Ťažnosť - *Elongation* - *Allungamento* ; min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross - sectional area* -

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**26329**	A067247/22	KV 40 - ---	**150, 150, 152**	**151**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A067247/22	10.00x5.00	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.
API 5 L 20.50 MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASTM A106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASME SA - 106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Miesto / *Location* / *Località*: **v Podbrezovej** **sna**
Dátum / *Date* / *Data*: **10.01.2023**
Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by MBRONZINI on 23/06/23

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EN 10204:2004/3.1

Číslo / *Number* / *Numero* **999/1/2023**

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Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer's Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L'allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=2062013519

Miesto / *Location* / *Località*	Dátum / *Date* / *Data*	Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*
v Podbrezovej **sna**	**10.01.2023**	**Ing. Vojtas Miroslav**

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Approved by MBRONZINI on 23/06/23

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Číslo / *Number* / *Numero*: **3200/1/2023**

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Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT221942

Číslo položky - Item number - Numero di articolo:
14

Č.obj.prij. - Consignee order No. - Numero dell'ordine del destinatario:
OF220649

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d'ordine dello stabilimento:
BM 257194/1/1 3313648

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM160CV ZM204YD

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3025837

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3320397

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

Pipex Italia S.P.A.
Viale Gian Galeazzo 15
20136 Milano
ITALY

IL PRESENTE CERTIFICATO E' VALIDO PER:
CLIENTE TAL TUBI Acciaio Low Barra SPA
ORDINE N° OF220649 / IT 221942
B.T. N° B/502 DEL 29-3-23 KG. PCS 44
PIPEX ITALIA SPA

Výrobok - *Product* - *Prodotto*:
Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**88.900** mm
Hrúbka steny - Wall thickness - Spessore:	**5.490** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**44**
Celková dĺžka - Total length - Lunghezza totale:	**264.00** m
Celková hmotnosť - Total mass - Peso totale:	**3051.00** kg

GALVANIZED PIPES ASTM A 53

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto / *Location* / *Località*: **v Podbrezovej** ma

Dátum / *Date* / *Data*: **19.01.2023**

Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by QUALITY2 on 03/04/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero*: **3200/1/2023**

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell'acciaio*
30036	44	264	3051	E

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne uklˈudnená oceľ hliníkom - *fully killed steel with Aluminium* - *acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Bez úpravy povrchu (neolejované) - *Without surface treatment (without oil)* - *Senza vernice protettiva*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
30036		0.16	0.52	0.20	0.012	0.007	0.17	0.05	0.06	0.023	0.03	0.001	0.005	0.001

Číslo tavby *Cast number* *Numero di colata*		B [%]	Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
30036		0.0003	0.28	0.007	0.006

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
30036	1	0.16	0.52	0.20	0.011	0.008	0.17	0.05	0.07	0.023	0.03	0.000	0.004	0.000
30036	2	0.16	0.52	0.20	0.011	0.008	0.18	0.05	0.07	0.023	0.03	0.000	0.004	0.000

Číslo tavby *Cast number* *Numero di colata*		B [%]
30036	1	<0.0001
30036	2	<0.0001

Miesto / *Location* / *Località*: v Podbrezovej ma

Dátum / *Date* / *Data*: 19.01.2023

Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by QUALITY2 on 03/04/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero*: **3200/1/2023**

Skúška ťahom - *Tensile test* - *Prova di trazione* : 20 °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:			min.	265	240	290	415	23.0	*
				max.	---	---	---	570	---	---
1	30036	A003039/23	18.97x5.65	L / V	380	357	357	466	34.4	36.6

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross - sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	30036	A003039/23	KV 40 - ---	184, 184, 188	185	-15

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A003039/23	10.00x5.00	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.
API 5 L 20.50 MPa 5 sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASME SA - 106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20 mm**

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASTM A106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20 mm**

Miesto / *Location* / *Località*: **v Podbrezovej** **ma**
Dátum / *Date* / *Data*: **19.01.2023**
Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by QUALITY2 on 03/04/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero* **3200/1/2023**

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer's Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá è certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L'allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=2121443778

Miesto / *Location* / *Località*: **v Podbrezovej ma**
Dátum / *Date* / *Data*: **19.01.2023**
Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

Approved by QUALITY2 on 03/04/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 23/11/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero*: **41845/1/2023**

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231359

Číslo položky - Item number - Numero di articolo:
8

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230576

Číslo zákazky výrobcu - Manufacturer's works order number - Conferma d´ordine dello stabilimento:
BM 265862/1/1 3333D78

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM144CH ZM196YD

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030206

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325388

Zákazník/Príjemca. - Customer/Consignee - Committente/Destinatario:

Pipex Italia S.P.A.
Viale Gian Galeazzo 15
20136 Milano
ITALY

IL PRESENTE CERTIFICATO E' VALIDO PER:
CLIENTE TAL TUBI ACCIAIO LOMBARDIA S.P.A.
ORDINE N° OF230576 / IT231359
DDT N° B.1426 DEL 22-11-23 Kg 22
PIPEX ITALIA SPA

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**88.900** mm
Hrúbka steny - Wall thickness - Spessore:	**5.490** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**45**
Celková dĺžka - Total length - Lunghezza totale:	**270.00** m
Celková hmotnosť - Total mass - Peso totale:	**3117.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto / *Location* / *Località*: **v Podbrezovej ma**
Dátum / *Date* / *Data*: **18.09.2023**
Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 6 MT 36 HEAT 31418 DIMENSIONS 88.9 x 5,49

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 23/11/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero*: **41845/1/2023**

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell'acciaio*
31418	**45**	**270**	**3117**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukludnená oceľ hliníkom - *fully killed steel with Aluminium* - *acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Bez úpravy povrchu (neolejované) - *Without surface treatment (without oil)* - *Senza vernice protettiva*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
31418		**0.16**	**0.53**	**0.21**	**0.015**	**0.006**	**0.20**	**0.06**	**0.09**	**0.027**	**0.03**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]	Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
31418		**0.0001**	**0.29**	**0.008**	**0.007**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
31418	**1**	**0.15**	**0.52**	**0.22**	**0.014**	**0.006**	**0.21**	**0.07**	**0.08**	**0.027**	**0.02**	**0.001**	**0.005**	**0.001**
31418	**2**	**0.15**	**0.52**	**0.22**	**0.014**	**0.006**	**0.21**	**0.07**	**0.08**	**0.027**	**0.02**	**0.001**	**0.005**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]
31418	**1**	**0.0001**
31418	**2**	**0.0001**

Miesto / *Location* / *Località*: **v Podbrezovej** **ma**

Dátum / *Date* / *Data*: **18.09.2023**

Závodný znalec / *Works Inspector* / *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 6 MT 36 HEAT 31418 DIMENSIONS 88,9 x 5,49

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 23/11/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo *Number* *Numero* **41845/1/2023**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:			min.	265	240	290	415	23.0	*
				max.	---	---	---	570	---	---
1	**31418**	A045317/23	19.20x5.74	L / V	**406**	**394**	**393**	**490**	**30.7**	**33.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross - sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**31418**	A045316/23	KV 40 - ---	**142, 146, 148**	**145**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A045316/23	10.00x5.00	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L 20.50 MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** % Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** % Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Miesto **v Podbrezovej** *Location* *Localitá* **ma**

Dátum **18.09.2023** *Date* *Data*

Závodný znalec *Works Inspector* *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 6 MT 36 HEAT 31418 DIMENSIONS 88.9 x 5.49

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by QUALITY1 on 23/11/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

41845/1/2023

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=2125348659

Miesto *Location* *Località*: **v Podbrezovej ma**
Dátum *Date* *Data*: **18.09.2023**
Závodný znalec *Works Inspector* *Ispettore della fabbrica*: **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

ROSETTI MARINO S.P.A. P.O.17230020029 123A30 TAL JOB N°323002954
N° 6 MT 36 HEAT 31418 DIMENSIONS 88,9 x 5,49

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo *Number* *Numero* **49493/1/2022**

List č. - *Sheet No.* - *Pagina No.*: **1 / 4**

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT221373

Číslo položky - Item number - Numero di articolo:
11

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF220412

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 253243/1/1 3233C05

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS425DN RS275YI

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3023635

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3226070

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

Pipex Italia S.P.A.
Viale Gian Galeazzo 15
20136 Milano
ITALY

IL PRESENTE CERTIFICATO E' VALIDO PER:
CLIENTE TALTUBI ACCIAIO LOM BARDA SPA
ORDINE N° OF 220412 / IT 221373
D.D.T. N° B/1890 DEL 16-12-2022 N° 31
PIPEX ITALIA SPA

Výrobok - *Product* - *Prodotto*:
Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**114.300** mm
Hrúbka steny - Wall thickness - Spessore:	**6.020** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**31**
Celková dĺžka - Total length - Lunghezza totale:	**186.00** m
Celková hmotnosť - Total mass - Peso totale:	**3031.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -20, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018 GALVANIZED PIPES ASTM A 53

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -20, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2018, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località* **v Podbrezovej** **ma**

Dátum *Date* *Data* **19.09.2022**

Závodný znalec *Works Inspector* *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

Approved by MBRONZINI on 22/12/22

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ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero* **49493/1/2022**

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell'acciaio*
24599	**31**	**186**	**3031**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne uklľudnená oceľ hliníkom - *fully killed steel with Aluminium* - *acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Bez úpravy povrchu (neolejované) - *Without surface treatment (without oil)* - *Senza vernice protettiva*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
24599		**0.16**	**0.51**	**0.22**	**0.014**	**0.007**	**0.20**	**0.09**	**0.08**	**0.028**	**0.02**	**0.001**	**0.004**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]	Exp.1 [%]	Exp.2 [%]	Exp.3 [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
24599		**0.0001**	**0.29**	**0.006**	**0.005**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		C [%]	Mn [%]	Si [%]	P [%]	S [%]	Cu [%]	Cr [%]	Ni [%]	Al [%]	Mo [%]	Ti [%]	V [%]	Nb [%]
24599	**1**	**0.17**	**0.50**	**0.22**	**0.014**	**0.008**	**0.21**	**0.08**	**0.09**	**0.028**	**0.02**	**0.001**	**0.004**	**0.001**
24599	**2**	**0.17**	**0.51**	**0.23**	**0.014**	**0.008**	**0.21**	**0.08**	**0.09**	**0.028**	**0.02**	**0.001**	**0.004**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		B [%]
24599	**1**	**0.0003**
24599	**2**	**0.0002**

Miesto / *Location* / *Località* **v Podbrezovej ma**

Dátum / *Date* / *Data* **19.09.2022**

Závodný znalec / *Works Inspector* / *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

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Approved by MBRONZINI on 22/12/22

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo *Number* *Numero* **49493/1/2022**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carica di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.	265	240	290	415	23.0	*
					max.	---	---	---	570	---	---
1	**24599**	A047359/22	25.26x6.63	L / V		**338**	**329**	**329**	**456**	**32.7**	**39.6**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross - sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**24599**	A047358/22	KV 40 - ---	**150, 154, 158**	**154**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A047358/22	10.00x5.00	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.
API 5 L 18.30 MPa 5 sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASME SA - 106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo
ASTM A106/E309 **100 %**
Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale* **2.20** mm

Miesto **v Podbrezovej** *Location* *Località* **ma**
Dátum **19.09.2022** *Date* *Data*
Závodný znalec *Works Inspector* *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

Approved by MBRONZINI on 22/12/22

ROSETTI MARINO S.P.A. P.O.1723002029 123A30 TAL JOB N°323002954
N° 3 MT 18 HEAT 24599 DIMENSIONS 114,3 x 6,02

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo / *Number* / *Numero* **49493/1/2022**

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer's Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L'allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall' ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1565577505

Miesto / *Location* / *Località* **v Podbrezovej ma**

Dátum / *Date* / *Data* **19.09.2022**

Závodný znalec / *Works Inspector* / *Ispettore della fabbrica* **Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

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Approved by MBRONZINI on 22/12/22

ŽELEZIARNE® PODBREZOVÁ

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EN 10204:2004/3.1

Číslo
Number
Numero

16017/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT230257

Číslo položky - Item number - Numero di articolo:
1

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230128

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 259921/1/1 7313116

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS200CP RS753YG

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
7001285

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
7321396

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

.
Seamless steel tubes in cold drawn execution according to Hot rolled standard.
.

Vonkajší priemer - Outside diameter - Diametro esterno:	**21.340** mm	
Hrúbka steny - Wall thickness - Spessore:	**2.770** mm	
Dĺžka - Length - Lunghezza:	**6000.000** mm	[-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**1362**	
Celková dĺžka - Total length - Lunghezza totale:	**8262.00** m	
Celková hmotnosť - Total mass - Peso totale:	**10524.00** kg	

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné žíhanie - *Normalizing* - *Normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**31.03.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2533/ 3402

Approved by QUALITY2 on 11/04/23

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ŽELEZIARNE® PODBREZOVÁ

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EN 10204:2004/3.1

Číslo
Number
Numero

16017/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
30316	**49**	**298**	**380**	**E**
30782	**1313**	**7964**	**10144**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min. max.	 0.20	 1.06	0.15 0.35	 0.020	 0.010	 0.30	 0.30	 0.40	0.015 0.060	 0.12	 0.040	 0.030	 0.019
30316		**0.16**	**0.51**	**0.22**	**0.015**	**0.009**	**0.20**	**0.07**	**0.07**	**0.029**	**0.02**	**0.001**	**0.005**	**0.001**
30782		**0.15**	**0.51**	**0.21**	**0.013**	**0.007**	**0.17**	**0.07**	**0.07**	**0.024**	**0.02**	**0.001**	**0.007**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min. max.	 0.0010	 0.40	 0.150	 0.060
30316		**0.0002**	**0.28**	**0.007**	**0.006**
30782		**0.0002**	**0.27**	**0.009**	**0.008**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
30316	**1**	**0.16**	**0.51**	**0.21**	**0.016**	**0.009**	**0.22**	**0.07**	**0.07**	**0.028**	**0.02**	**0.001**	**0.004**	**0.000**
30316	**2**	**0.16**	**0.51**	**0.21**	**0.015**	**0.010**	**0.21**	**0.07**	**0.07**	**0.028**	**0.02**	**0.001**	**0.004**	**0.000**
30782	**1**	**0.15**	**0.51**	**0.21**	**0.013**	**0.007**	**0.17**	**0.06**	**0.07**	**0.025**	**0.02**	**0.001**	**0.006**	**0.001**
30782	**2**	**0.15**	**0.51**	**0.20**	**0.013**	**0.007**	**0.17**	**0.06**	**0.07**	**0.025**	**0.02**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
30316	**1**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá
koll

Dátum **31.03.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2534/ 3402

Approved by QUALITY2 on 11/04/23

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Číslo
Number
Numero

16017/1/2023

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
30316	**2**	**0.0001**
30782	**1**	**0.0001**
30782	**2**	**<0.0001**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:			min.	265	240	290	415	23.0	* 30.0
				max.	---	---	---	570	---	---
1	**30316**	B005536/23	21.38x2.76	L / R	**330**	**325**	**327**	**480**	**36.1**	**41.2**
2	**30782**	B008900/23	21.33x2.78	L / R	**303**	**296**	**300**	**444**	**36.4**	**43.0**
3	**30782**	B008901/23	21.34x2.78	L / R	**309**	**302**	**303**	**446**	**36.1**	**43.2**
4	**30782**	B008902/23	21.34x2.77	L / R	**315**	**305**	**307**	**450**	**36.5**	**43.1**
5	**30782**	B008903/23	21.35x2.77	L / R	**314**	**307**	**309**	**451**	**36.4**	**43.5**
6	**30782**	B008904/23	21.34x2.78	L / R	**314**	**306**	**311**	**455**	**36.9**	**43.4**
7	**30782**	B008905/23	21.35x2.77	L / R	**318**	**313**	**314**	**457**	**37.0**	**44.5**
8	**30782**	D000422/23	21.32x2.77	L / R	**325**	**318**	**317**	**450**	**38.6**	**45.8**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Miesto **v Podbrezovej**
Location
Località

Dátum **31.03.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

koll

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2535/ 3402

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Number
Numero

16017/1/2023

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm
Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
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Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Železiarne Podbrezová garantujú predpísané hodnoty skúšky rázom v ohybe 40.00 J / -15.00 °C bez vykonania skúšky z dôvodu nedostatočného rozmeru rúry.
Zeleziarne Podbrezova guarantees impact values 40.00 J / -15.00 °C without performing the test due to the size of pipe.
Zeleziarne Podbrezova garante i valori della prova 40.00 J / -15.00 °C di resilienza senza esecuzione della prova a causa di dimensioni del tubo.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota žíhania je min. 900°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Normalized at min. temperature of 900°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% durante Lo: 5.65 √ So. La temperatura di ricottura è al min. 900 °C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Miesto *Location* *Localitá*	Dátum *Date* *Data*	Závodný znalec *Works Inspector* *Ispettore della fabbrica*
v Podbrezovej **koll**	**31.03.2023**	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
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Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2536/ 3402

Approved by QUALITY2 on 11/04/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

16017/1/2023

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=428213245

Miesto *Location* *Localitá*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**31.03.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2537/ 3402

Approved by QUALITY2 on 11/04/23

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EN 10204:2004/3.1

Číslo
Number
Numero

40819/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231030

Číslo položky - Item number - Numero di articolo:
2

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230484

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 264034/1/2 3333948

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM160CV ZM204YD

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030087

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325253

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**26.670** mm
Hrúbka steny - Wall thickness - Spessore:	**2.870** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**148**
Celková dĺžka - Total length - Lunghezza totale:	**888.00** m
Celková hmotnosť - Total mass - Peso totale:	**1522.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**11.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2538/ 3402

Approved by QUALITY1 on 15/09/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
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Number
Numero

40819/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
32768	**148**	**888**	**1522**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
32768		**0.15**	**0.54**	**0.22**	**0.010**	**0.007**	**0.16**	**0.07**	**0.07**	**0.026**	**0.03**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
32768		**0.0001**	**0.28**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
32768	**1**	**0.16**	**0.53**	**0.23**	**0.010**	**0.008**	**0.16**	**0.06**	**0.07**	**0.025**	**0.03**	**0.001**	**0.002**	**0.000**
32768	**2**	**0.16**	**0.53**	**0.23**	**0.010**	**0.008**	**0.15**	**0.06**	**0.07**	**0.025**	**0.03**	**0.001**	**0.002**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32768	**1**	**0.0002**
32768	**2**	**0.0002**

Miesto **v Podbrezovej**
Location
Localitá
Taz

Dátum **11.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2539/ 3402

Approved by QUALITY1 on 15/09/23

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Numero

40819/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
C. Nr	Predpis - Requirements - Requisiti:			min.	265	240	290	415	23.0	* 30.0
				max.	---	---	---	570	---	---
1	**32768**	A039349/23	26.67x2.89	L / R	**383**	**378**	**376**	**526**	**40.3**	**46.3**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
1.40 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
1.40 mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Miesto **v Podbrezovej**
Location **Taz**
Localitá

Dátum **11.09.2023**
Date
Data

Závodný znalec **Ing. Vojtas Miroslav**
Works Inspector
Ispettore della fabbrica

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2540/ 3402

Approved by QUALITY1 on 15/09/23

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ŽELEZIARNE PODBREZOVÁ

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Numero

40819/1/2023

Železiarne Podbrezová garantujú predpísané hodnoty skúšky rázom v ohybe 40.00 J / -15.00 °C bez vykonania skúšky z dôvodu nedostatočného rozmeru rúry.
Zeleziarne Podbrezova guarantees impact values 40.00 J / -15.00 °C without performing the test due to the size of pipe.
Zeleziarne Podbrezova garante i valori della prova 40.00 J / -15.00 °C di resilienza senza esecuzione della prova a causa di dimensioni del tubo.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
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Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1880301240

Miesto *Location* *Localitá*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**11.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2541/ 3402

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Number
Numero

12347/1/2022

List č. - *Sheet No.* - *Pagina No.*: **1 / 5**

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT220074

Číslo položky - Item number - Numero di articolo:
2

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF220014

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 245807/1/1 3213950

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM784CJ ZM280YD

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3019595

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3221426

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**33.400** mm
Hrúbka steny - Wall thickness - Spessore:	**3.380** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**1128**
Celková dĺžka - Total length - Lunghezza totale:	**6782.00** m
Celková hmotnosť - Total mass - Peso totale:	**17263.00** kg

Materiál - *Material* - *Materiale*:

B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -20, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -20, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2018, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**28.02.2022**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2542/ 3402

Approved by MBRONZINI on 08/03/22

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

12347/1/2022

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
20873	**1128**	**6782**	**17263**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
20873		**0.16**	**0.53**	**0.23**	**0.012**	**0.005**	**0.25**	**0.06**	**0.07**	**0.023**	**0.02**	**0.001**	**0.006**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
20873		**0.0001**	**0.29**	**0.007**	**0.006**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
20873	**1**	**0.18**	**0.52**	**0.22**	**0.016**	**0.008**	**0.21**	**0.06**	**0.09**	**0.025**	**0.02**	**0.001**	**0.005**	**0.001**
20873	**2**	**0.17**	**0.52**	**0.23**	**0.016**	**0.009**	**0.21**	**0.06**	**0.09**	**0.024**	**0.02**	**0.001**	**0.005**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
20873	**1**	**0.0003**
20873	**2**	**0.0002**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **28.02.2022**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Taz

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2543/ 3402

Approved by MBRONZINI on 08/03/22

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ŽELEZIARNE PODBREZOVÁ

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Inspection certificate
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Číslo
Number
Numero

12347/1/2022

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Medza klzu Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	Ťažnosť 2" [%]
	Predpis - Requirements - Requisiti:				min. 265 max. ---	295 ---	415 570	23.0 ---	30.0 ---
1	**20873**	A009159/22	33.89x3.46	L / R	**369**	**367**	**511**	**30.3**	**45.2**
2	**20873**	A009160/22	33.87x3.47	L / R	**370**	**368**	**513**	**30.1**	**44.8**
3	**20873**	A009161/22	33.91x3.45	L / R	**368**	**367**	**509**	**30.5**	**45.6**
4	**20873**	A009162/22	33.86x3.47	L / R	**371**	**370**	**516**	**29.9**	**44.4**
5	**20873**	A009163/22	33.92x3.45	L / R	**368**	**367**	**506**	**30.7**	**46.0**
6	**20873**	A009164/22	33.69x3.55	L / R	**365**	**363**	**505**	**30.9**	**46.6**

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

R = Plný prierez - *Full section* - *Sezione trasversale completa*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**20873**	A009159/22	KV 40 - ---	**100, 104, 116**	**107**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A009159/22	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Miesto **v Podbrezovej**
Location
Località
Taz

Dátum **28.02.2022**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2544/ 3402

Approved by MBRONZINI on 08/03/22

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ŽELEZIARNE® PODBREZOVÁ

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Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

12347/1/2022

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm
Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.40** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Miesto *Location* *Localitá*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**28.02.2022**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2545/ 3402

Approved by MBRONZINI on 08/03/22

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

12347/1/2022

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=586682476

Miesto *Location* *Localitá*	**v Podbrezovej** **Taz**	Dátum *Date* *Data*	**28.02.2022**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2546/ 3402

Approved by MBRONZINI on 08/03/22

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

46457/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231581

Číslo položky - Item number - Numero di articolo:
4

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230675

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 267369/1/3 3343719

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM442CY ZM589YE

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030699

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325952

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**48.260** mm
Hrúbka steny - Wall thickness - Spessore:	**3.680** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**410**
Celková dĺžka - Total length - Lunghezza totale:	**2460.00** m
Celková hmotnosť - Total mass - Peso totale:	**10108.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**17.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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CIN: 31 562 141, VAT No: SK2020458704
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Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2547/ 3402

Approved by D.MOLINARI on 17/10/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

46457/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
33181	**410**	**2460**	**10108**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
33181		**0.16**	**0.52**	**0.25**	**0.014**	**0.005**	**0.25**	**0.12**	**0.08**	**0.023**	**0.02**	**0.001**	**0.006**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
33181		**0.0002**	**0.30**	**0.008**	**0.007**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
33181	**1**	**0.17**	**0.53**	**0.25**	**0.014**	**0.005**	**0.25**	**0.11**	**0.08**	**0.023**	**0.02**	**0.001**	**0.005**	**0.001**
33181	**2**	**0.17**	**0.53**	**0.25**	**0.013**	**0.005**	**0.25**	**0.11**	**0.08**	**0.022**	**0.02**	**0.001**	**0.005**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
33181	**1**	**<0.0001**
33181	**2**	**<0.0001**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **17.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Moc

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2548/ 3402

Approved by D.MOLINARI on 17/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
Number
Numero

46457/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265 max. ---	240 ---	290 ---	415 570	23.0 ---	* ---
1	**33181**	A050828/23	12.63x3.45	L / V	**450**	**435**	**437**	**513**	**31.5**	**27.2**
2	**33181**	A050829/23	12.62x3.46	L / V	**452**	**436**	**438**	**516**	**31.0**	**26.8**
3	**33181**	A050831/23	12.49x3.65	L / V	**444**	**433**	**434**	**530**	**30.3**	**25.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**33181**	A050828/23	KV 40 - ---	**100, 112, 92**	**101**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A050828/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Miesto **v Podbrezovej**
Location **Moc**
Localitá

Dátum **17.10.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2549/ 3402

Approved by D.MOLINARI on 17/10/23

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ŽELEZIARNE® PODBREZOVÁ

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EN 10204:2004/3.1

Číslo
Number
Numero

46457/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.80** mm
Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.80** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**17.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2550/ 3402

Approved by D.MOLINARI on 17/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

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Číslo
Number
Numero

46457/1/2023

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1883285112

Miesto *Location* *Localitá*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**17.10.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2551/ 3402

Approved by D.MOLINARI on 17/10/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50164/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231752

Číslo položky - Item number - Numero di articolo:
3

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230765

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 268248/1/1 2343760

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM296CK ZM555YC

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3031131

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3326429

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**48.260** mm
Hrúbka steny - Wall thickness - Spessore:	**3.680** mm
Dĺžka - Length - Lunghezza:	**6000.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**126**
Celková dĺžka - Total length - Lunghezza totale:	**760.00** m
Celková hmotnosť - Total mass - Peso totale:	**3108.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2552/ 3402

Approved by D.MOLINARI on 14/11/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

50164/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
33518	**126**	**760**	**3108**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
33518		**0.16**	**0.52**	**0.21**	**0.008**	**0.006**	**0.20**	**0.05**	**0.07**	**0.023**	**0.02**	**0.001**	**0.005**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
33518		**0.0001**	**0.28**	**0.006**	**0.005**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
33518	**1**	**0.16**	**0.52**	**0.22**	**0.009**	**0.006**	**0.21**	**0.05**	**0.07**	**0.024**	**0.02**	**0.001**	**0.005**	**0.000**
33518	**2**	**0.16**	**0.52**	**0.22**	**0.009**	**0.006**	**0.21**	**0.05**	**0.07**	**0.025**	**0.02**	**0.001**	**0.005**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
33518	**1**	**0.0001**
33518	**2**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá
Moc

Dátum **13.11.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2553/ 3402

Approved by D.MOLINARI on 14/11/23

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EN 10204:2004/3.1

Číslo
Number
Numero

50164/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:			min.	265	240	290	415	23.0	*
				max.	---	---	---	570	---	---
1	**33518**	A056963/23	12.91x3.44	L / V	**413**	**412**	**414**	**505**	**39.8**	**36.2**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**33518**	A056963/23	KV 40 - ---	**100, 104, 108**	**104**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A056963/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška ohybom vyhovela.
Bend test without objections.
Prova di piegamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **20.50** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale

1.80 mm

Miesto **v Podbrezovej**
Location
Localitá **Moc**

Dátum **13.11.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2554/ 3402

Approved by D.MOLINARI on 14/11/23

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Číslo
Number
Numero

50164/1/2023

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**1.80** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Miesto *Location* *Localitá*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2555/ 3402

Approved by D.MOLINARI on 14/11/23

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Číslo
Number
Numero

50164/1/2023

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=601826303

Miesto *Location* *Località*	**v Podbrezovej** **Moc**	Dátum *Date* *Data*	**13.11.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2556/ 3402

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Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

57270/1/2022

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT221532

Číslo položky - Item number - Numero di articolo:
21

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF220468

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 254495/1/1 3243657

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZM420CT ZM610YE

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3024465

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3226967

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**88.900** mm
Hrúbka steny - Wall thickness - Spessore:	**4.780** mm
Dĺžka - Length - Lunghezza:	**11800.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**43**
Celková dĺžka - Total length - Lunghezza totale:	**509.00** m
Celková hmotnosť - Total mass - Peso totale:	**5132.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -20, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -20, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1, ASME B36.10M :2018, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **sag**	Dátum *Date* *Data*	**31.10.2022**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2557/ 3402

Approved by MBRONZINI on 10/11/22

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Číslo
Number
Numero

57270/1/2022

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
25284	**43**	**509**	**5132**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
25284		**0.16**	**0.54**	**0.22**	**0.014**	**0.007**	**0.17**	**0.08**	**0.06**	**0.026**	**0.02**	**0.001**	**0.006**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
25284		**<0.0001**	**0.29**	**0.007**	**0.006**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
25284	**1**	**0.16**	**0.54**	**0.23**	**0.014**	**0.007**	**0.18**	**0.09**	**0.06**	**0.025**	**0.02**	**0.001**	**0.005**	**0.001**
25284	**2**	**0.16**	**0.55**	**0.23**	**0.014**	**0.007**	**0.18**	**0.09**	**0.06**	**0.025**	**0.02**	**0.001**	**0.005**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
25284	**1**	**0.0001**
25284	**2**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá
sag

Dátum **31.10.2022**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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2558/ 3402

Approved by MBRONZINI on 10/11/22

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Number
Numero

57270/1/2022

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min.	265	240	290	415	23.0	*
					max.	---	---	---	570	---	---
1	**25284**	A054705/22	19.12x4.86	L / V		**390**	**377**	**380**	**485**	**32.2**	**32.0**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**25284**	A054704/22	KV 40 - ---	**132, 138, 144**	**138**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A054704/22	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **18.70** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Miesto **v Podbrezovej**
Location
Localitá
sag

Dátum **31.10.2022**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica
Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2559/ 3402

Approved by MBRONZINI on 10/11/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

57270/1/2022

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 07/202/9150/WZ/0915/20 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2023. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 07/202/9150/WZ/0915/20 with the validity till 02/2023 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 07/202/9150/WZ/0915/20 è valido fino al 02/2023 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1143401776

Miesto *Location* *Localitá*	**v Podbrezovej** **sag**	Dátum *Date* *Data*	**31.10.2022**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2560/ 3402

Approved by MBRONZINI on 10/11/22

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43824/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231358

Číslo položky - Item number - Numero di articolo:
9

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230576

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 265861/1/1 3333E27

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS074CM RS044YH

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030405

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325619

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**88.900** mm
Hrúbka steny - Wall thickness - Spessore:	**4.780** mm
Dĺžka - Length - Lunghezza:	**11800.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**26**
Celková dĺžka - Total length - Lunghezza totale:	**308.00** m
Celková hmotnosť - Total mass - Peso totale:	**3098.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej ma**	Dátum *Date* *Data*	**29.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2561/ 3402

Approved by D.MOLINARI on 02/10/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43824/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
32967	**26**	**308**	**3098**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.020				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.30	0.060	0.08	0.040	0.020	0.019
32967		**0.16**	**0.52**	**0.21**	**0.011**	**0.006**	**0.17**	**0.06**	**0.09**	**0.021**	**0.03**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
32967		**0.0003**	**0.28**	**0.003**	**0.002**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
32967	**1**	**0.17**	**0.53**	**0.21**	**0.013**	**0.007**	**0.17**	**0.06**	**0.10**	**0.020**	**0.03**	**0.001**	**0.001**	**0.001**
32967	**2**	**0.17**	**0.52**	**0.22**	**0.012**	**0.007**	**0.17**	**0.06**	**0.10**	**0.020**	**0.03**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32967	**1**	**0.0002**
32967	**2**	**0.0002**

Miesto **v Podbrezovej**
Location
Localitá

Dátum **29.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2562/ 3402

Approved by D.MOLINARI on 02/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

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Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43824/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265	240	290	415	23.0	*
					max. ---	---	---	570	---	---
1	**32967**	A046465/23	19.36x4.64	L / V	**412**	**407**	**408**	**509**	**28.2**	**30.2**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**32967**	A046465/23	KV 40 - ---	**114, 123, 129**	**122**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A046465/23	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **18.70** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Miesto **v Podbrezovej**
Location
Localitá
ma

Dátum **29.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica
Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2563/ 3402

Approved by D.MOLINARI on 02/10/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43824/1/2023

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attivitá radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=1728863287

Miesto *Location* *Localitá*	**v Podbrezovej** **ma**	Dátum *Date* *Data*	**29.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2564/ 3402

Approved by D.MOLINARI on 02/10/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26889/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT230594

Číslo položky - Item number - Numero di articolo:
14

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230292

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 261753/1/1 3323A21

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS200CP RS753YG

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3028612

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3323582

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**114.300** mm
Hrúbka steny - Wall thickness - Spessore:	**4.780** mm
Dĺžka - Length - Lunghezza:	**11800.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**84**
Celková dĺžka - Total length - Lunghezza totale:	**996.00** m
Celková hmotnosť - Total mass - Peso totale:	**12753.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**02.06.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2565/ 3402

Approved by QUALITY1 on 06/06/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26889/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
31860	**84**	**996**	**12753**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
31860		**0.17**	**0.52**	**0.23**	**0.015**	**0.003**	**0.14**	**0.06**	**0.08**	**0.026**	**0.02**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
31860		**0.0002**	**0.29**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
31860	**1**	**0.18**	**0.53**	**0.23**	**0.014**	**0.003**	**0.14**	**0.06**	**0.08**	**0.025**	**0.02**	**0.001**	**0.002**	**0.000**
31860	**2**	**0.18**	**0.53**	**0.23**	**0.014**	**0.003**	**0.14**	**0.06**	**0.08**	**0.025**	**0.02**	**0.001**	**0.002**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
31860	**1**	**0.0001**
31860	**2**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá
koll

Dátum **02.06.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2566/ 3402

Approved by QUALITY1 on 06/06/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26889/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265	240	290	415	23.0	*
					max. ---	---	---	570	---	---
1	**31860**	A026320/23	25.07x4.62	L / V	**363**	**356**	**353**	**494**	**30.8**	**33.2**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**31860**	A026320/23	KV 40 - ---	**108, 108, 112**	**109**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A026320/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **14.60** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Miesto **v Podbrezovej**
Location
Localitá **koll**

Dátum **02.06.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2567/ 3402

Approved by QUALITY1 on 06/06/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26889/1/2023

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=965944669

Miesto *Location* *Localitá*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**02.06.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2568/ 3402

Approved by QUALITY1 on 06/06/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26030/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT230594

Číslo položky - Item number - Numero di articolo:
14

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230292

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 261753/1/1 3323A21

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
ZV675DC ZV081YH

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3028503

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3323462

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**114.300** mm
Hrúbka steny - Wall thickness - Spessore:	**4.780** mm
Dĺžka - Length - Lunghezza:	**11800.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**46**
Celková dĺžka - Total length - Lunghezza totale:	**544.00** m
Celková hmotnosť - Total mass - Peso totale:	**6983.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev.7 :2021, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**29.05.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2569/ 3402

Approved by QUALITY1 on 06/06/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

26030/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
31860	**46**	**544**	**6983**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min.			0.15						0.015				
	max.	0.20	1.06	0.35	0.020	0.010	0.30	0.30	0.40	0.060	0.12	0.040	0.030	0.019
31860		**0.17**	**0.52**	**0.23**	**0.015**	**0.003**	**0.14**	**0.06**	**0.08**	**0.026**	**0.02**	**0.001**	**0.002**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min.				
	max.	0.0010	0.40	0.150	0.060
31860		**0.0002**	**0.29**	**0.004**	**0.003**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
31860	**1**	**0.18**	**0.53**	**0.23**	**0.014**	**0.003**	**0.14**	**0.06**	**0.08**	**0.025**	**0.02**	**0.001**	**0.002**	**0.000**
31860	**2**	**0.18**	**0.53**	**0.23**	**0.014**	**0.003**	**0.14**	**0.06**	**0.08**	**0.025**	**0.02**	**0.001**	**0.002**	**0.000**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
31860	**1**	**0.0001**
31860	**2**	**0.0001**

Miesto **v Podbrezovej**
Location
Localitá
koll

Dátum **29.05.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2570/ 3402

Approved by QUALITY1 on 06/06/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

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Číslo
Number
Numero

26030/1/2023

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265	240	290	415	23.0	*
					max. ---	---	---	570	---	---
1	**31860**	A026321/23	25.06x4.63	L / V	**362**	**355**	**352**	**492**	**31.0**	**33.4**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**31860**	A026320/23	KV 40 - ---	**108, 108, 112**	**109**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A026320/23	10.00x2.50	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **14.60** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASTM A106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Skúška vírivými prúdmi vyhovela
Eddy current test without objections
Controllo eddy current con esito positivo

ASME SA - 106/E309 **100** %

Priemer vývrtu
Drilled hole
Diametro del difetto artificiale
2.20 mm

Miesto **v Podbrezovej**
Location
Localitá **koll**

Dátum **29.05.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2571/ 3402

Approved by QUALITY1 on 06/06/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE® PODBREZOVÁ

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EN 10204:2004/3.1

Číslo
Number
Numero

26030/1/2023

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu HU95/4628, platnosť certifikátu je do 15.6.2023.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. HU95/4628, validity: 15.6.2023.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato HU95/4628, validitá al 15.6.2023.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=405579239

Miesto *Location* *Localitá*	**v Podbrezovej** **koll**	Dátum *Date* *Data*	**29.05.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2572/ 3402

Approved by QUALITY1 on 06/06/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43826/1/2023

Č.ext.obj. - External order No. - Numero dell'ordine esterno:
IT231358

Číslo položky - Item number - Numero di articolo:
12

Č.obj.príj. - Consignee order No. - Numero dell'ordine del destinatario:
OF230576

Číslo zákazky výrobcu - Manufacturer's works order number
- Conferma d´ordine dello stabilimento:
BM 265861/1/1 3333E30

Číslo dopravného prostriedku - Transport No. - Camion Nr.:
RS074CM RS044YH

Číslo ložného listu - *Loading Bill No.* - *Polizza di carico*:
3030405

Číslo avíza - *Dispatch note* - *Avviso di spedizione*:
3325619

Zákazník/Príjemca. - Customer/Consignee
- Committente/Destinatario:

T.A.L. Tubi Acciaio Lombarda S.p.A.
Via G. di Vittorio, 6
29017 Fiorenzuola d'Arda, Piacenza
ITALY

Výrobok - *Product* - *Prodotto*:

Rúry oceľové bezošvé, valcované za tepla - rúry pre potrubia pre horľavé médiá
Seamless hot finished steel tubes - pipelines for combustible fluids
Tubi di acciaio senza saldatura laminati a caldo – tubi per condotte per fluidi combustibili

Vonkajší priemer - Outside diameter - Diametro esterno:	**114.300** mm
Hrúbka steny - Wall thickness - Spessore:	**4.780** mm
Dĺžka - Length - Lunghezza:	**11800.000** mm [-0 +100] mm
Počet kusov - Number of pieces - Numero di pezzi:	**21**
Celková dĺžka - Total length - Lunghezza totale:	**249.00** m
Celková hmotnosť - Total mass - Peso totale:	**3167.00** kg

Materiál - *Material* - *Materiale*:

Grade B PSL1 API SPEC. 5L Ed.46th2018Err.2018, Grade B ASME SA-106/SA-106M Ed.2021, Grade B ASME SA-53/SA-53M Ed.2021, Grade B ASTM A 106/A 106M -19a, Grade B ASTM A 53/A 53M -22, L245 PSL1 API SPEC. 5L Ed.46th2018Err.2018, L290 PSL1 API SPEC. 5L Ed.46th2018Err.2018, P265GH+N TC1 EN 10216-2 :2013+A1:2019, X42 PSL1 API SPEC. 5L Ed.46th2018Err.2018

Stav dodania - *Products as delivered condition* - *Stato di fornitura*:

Normalizačné tvárnenie - *Normalizing forming* - *Formatura a temperatura di normalizzazione*

Technické predpisy - *Technical requirements/Demand* - *Requisiti tecnici*:

API SPEC. 5L Ed.46th2018Err.2018, ASME SA-106/SA-106M Ed.2021, ASME SA-53/SA-53M Ed.2021, ASME SA-530/SA-530M Ed.2021, ASTM A 106/A 106M -19a, ASTM A 53/A 53M -22, ASTM A 530/A 530M -18, EN 10216-2 :2013+A1:2019, ASME B36.10M :2022, TS 01 rev. 08 :2023, ANSI-NACE MR0175/ISO 15156 pt.1+pt.2, NACE MR0103 /ISO 17945 :2015, PED 2014/68/EU

Miesto *Location* *Località*	**v Podbrezovej ma**	Dátum *Date* *Data*	**29.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

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ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2573/ 3402

Approved by D.MOLINARI on 02/10/23

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43826/1/2023

Číslo tavby *Cast number* *Numero di colata*	Počet kusov *Number of pieces* *Numero di pezzi*	Dĺžka *Length* *Lunghezza* [m]	Hmotnosť *Mass* *Peso* [kg]	Druh tavenia *Steelmaking process* *Procedimento di elaborazione dell´acciaio*
32759	**2**	**24**	**300**	**E**
32966	**19**	**225**	**2867**	**E**

E = elektrická oblúková pec - *electric arc furnace* - *forno elettrico ad arco*

Druh ocele - *Steel grade* - *Acciaio*:

úplne ukľudnená oceľ hliníkom - *fully killed steel with Aluminium - acciaio totalmente calmato (Al)*

Úprava povrchu - *Surface protection* - *Protezione della superficie*:

Ochrana povrchu UV lakom - *Surface protection with UV lacquer - Protezione della superficie con vernice UV*

Chemické zloženie - *Chemical composition* - *Composizione chimica*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
	Predpis - *Requirements* - *Requisiti*													
	min. max.	0.20	1.06	0.15 0.35	0.020	0.010	0.30	0.30	0.30	0.020 0.060	0.08	0.040	0.020	0.019
32759		**0.16**	**0.52**	**0.21**	**0.012**	**0.006**	**0.17**	**0.07**	**0.08**	**0.023**	**0.03**	**0.001**	**0.003**	**0.001**
32966		**0.15**	**0.53**	**0.24**	**0.014**	**0.006**	**0.17**	**0.06**	**0.08**	**0.024**	**0.02**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]	**Exp.1** [%]	**Exp.2** [%]	**Exp.3** [%]
	min. max.	0.0010	0.40	0.150	0.060
32759		**0.0001**	**0.28**	**0.005**	**0.004**
32966		**0.0003**	**0.27**	**0.003**	**0.002**

Exp.1 = CEV = C + Mn/6 + (V+Mo+Cr)/5 + (Ni+Cu)/15

Exp.2 = V + Nb + Ti

Exp.3 = V + Nb

Výrobková analýza - *Product analysis* - *Analisi di prodotto*:

Číslo tavby *Cast number* *Numero di colata*		**C** [%]	**Mn** [%]	**Si** [%]	**P** [%]	**S** [%]	**Cu** [%]	**Cr** [%]	**Ni** [%]	**Al** [%]	**Mo** [%]	**Ti** [%]	**V** [%]	**Nb** [%]
32759	**1**	**0.17**	**0.53**	**0.21**	**0.011**	**0.006**	**0.17**	**0.07**	**0.09**	**0.023**	**0.03**	**0.001**	**0.002**	**0.001**
32759	**2**	**0.17**	**0.52**	**0.20**	**0.011**	**0.006**	**0.17**	**0.07**	**0.08**	**0.023**	**0.03**	**0.001**	**0.002**	**0.001**
32966	**1**	**0.15**	**0.53**	**0.24**	**0.013**	**0.005**	**0.16**	**0.05**	**0.09**	**0.023**	**0.02**	**0.001**	**0.001**	**0.001**
32966	**2**	**0.15**	**0.53**	**0.24**	**0.013**	**0.005**	**0.16**	**0.05**	**0.09**	**0.023**	**0.02**	**0.001**	**0.001**	**0.001**

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32759	**1**	**0.0002**

Miesto **v Podbrezovej**
Location
Località

Dátum **29.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
CIN: 31 562 141, VAT No: SK2020458704
Bank account: Slovenská sporiteľňa, a.s., IBAN: SK69 0900 0000 0000 7990 0086, SWIFT (BIC): GIBASKBX
Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2574/ 3402

Approved by D.MOLINARI on 02/10/23

TAL SPA - THIS DOCUMENT IS REPRODUCED BY A COMPUTERIZED SYSTEM AND IS CONFORM TO THE ORIGINAL

ŽELEZIARNE PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43826/1/2023

Číslo tavby *Cast number* *Numero di colata*		**B** [%]
32759	**2**	**0.0002**
32966	**1**	**0.0002**
32966	**2**	**0.0002**

Skúška ťahom - *Tensile test* - *Prova di trazione* : **20** °C

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu/typ vzorky *Direction/Type of the test piece* *Orientamento/Tipo della provetta*	Medza klzu *Yield point - Proof stress* *Limite di snervamento* ReH [MPa]	Rp0,2 [MPa]	Rt0,5 [MPa]	Pevnosť v ťahu *Tensile strength* *Carico di rottura* Rm [MPa]	Ťažnosť *Elongation* *Allungamento* A5,65 [%]	2" [%]
	Predpis - Requirements - Requisiti:				min. 265 max. ---	240 ---	290 ---	415 570	23.0 ---	* ---
1	**32759**	A048857/23	25.70x5.05	L / V	**368**	**361**	**363**	**477**	**33.4**	**39.6**
2	**32966**	A047161/23	25.61x5.35	L / V	**337**	**326**	**327**	**449**	**29.7**	**34.6**

* Ťažnosť - *Elongation* - *Allungamento* : min. (1940*So**0.2)/(Rm**0.9)

So [mm2] = prierez vzorky na skúšku ťahom - *tensile test specimen cross* - *sectional area* - .

Rm [MPa] = predpísaná minimálna pevnosť v ťahu - *specified minimum tensile strength* - .

L = Pozdĺžny - *Longitudinal* - *Longitudinale*

V = Výrez - *Strip test* - *Striscia*

Skúška rázom v ohybe Charpy - *Charpy impact test* - *Prova di resilienza Charpy*: **ASTM A 370**

C. Nr	Číslo tavby *Cast number* *Numero di colata*	Vzorka č. *Test sample No.* *No. di provino*	Predpis *Requirements* *Requisiti* min.-max. [J]	Jednotlivé hodnoty *Individual values* *Valori singoli* [J]	Priemerná hodnota *Mean value* *Valore medio* [J]	Teplota skúšania *Test temperature* *Temperatura di prova* [°C]
1	**32759**	A048856/23	KV 40 - ---	**123, 132, 135**	**130**	**-15**
2	**32966**	A047161/23	KV 40 - ---	**114, 123, 129**	**122**	**-15**

C. Nr	Vzorka č. *Test sample No.* *No. di provino*	Rozmery *Dimensions* *Dimensioni* [mm]	Smer odberu vzorky *Direction of the test piece* *Orientamento della provetta*
1	A048856/23	10.00x3.33	L
2	A047161/23	10.00x3.33	L

Skúška stlačením vyhovela.
Flattening test without objections.
Prova di schiaccio di esito soddisfacente.

Skúška rozširovaním vyhovela.
Flaring test without objections.
Prova di allargamento con esito soddisfacente.

Miesto **v Podbrezovej**
Location
Località
ma

Dátum **29.09.2023**
Date
Data

Závodný znalec
Works Inspector
Ispettore della fabbrica

Ing. Vojtas Miroslav

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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Registered in Register of Business Names in the District Court Banská Bystrica, Section Sa, Entry No. 69/S

ŽELEZIARNE PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2575/ 3402

Approved by D.MOLINARI on 02/10/23

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ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
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EN 10204:2004/3.1

Číslo
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Numero

43826/1/2023

Skúška vodným tlakom vyhovela.
Hydraulic pressure test without objections.
Prova idraulica con esito soddisfacente.

API 5 L **14.60** MPa **5** sec 100%

Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASTM A106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**2.20** mm
Skúška vírivými prúdmi vyhovela *Eddy current test without objections* *Controllo eddy current con esito positivo*	**ASME SA - 106/E309**	**100** %	Priemer vývrtu *Drilled hole* *Diametro del difetto artificiale*	**2.20** mm

Systém kvality výrobcu je certifikovaný fy SGS podľa ISO 9001, číslo certifikátu SK20/3261, platnosť certifikátu je do 15.6.2026.
Producer´s Quality Assurance Sytem is certified according to ISO 9001 by SGS, certificate no. SK20/3261, validity: 15.6.2026.
Il sistema della qualitá é certificata secondo ISO 9001 da SGS, numero del certificato SK20/3261, validitá al 15.6.2026.

Potvrdzujeme, že minimálne hodnoty medze klzu za zvýšenej teploty sa zhodujú s minimálnymi hodnotami medze klzu pre všetky zvýšené teploty, ktoré sú predpísané normou ASTM ASME II, časť D, tabuľka Y1.
We certify that min. hot yield point values are in compliance with the min. hot yield point values for all the elevated temperatures prescribed by ASTM ASME II,part D,table Y1.
Si attesta che i valori minimi di snervamento a caldo sono conformi ai valori minimi di snervamento a caldo per tutte le alte temperature prescritte dalla norma ASTM ASME II,part D,tabella Y1.

Úkos je podľa ASME B 16.25.
Bevelled as per ASME B 16.25.
Il taglio è conforme alla ASME B 16.25.

Veľkost zrna je min. 8 podľa ASTM E 112.
Grain size is min. 8 acc. to ASTM E 112.
Dimensione del grano é min. 8 secondo ASTM E 112.

Ťažnosť po roztrhnutí podľa PED, príloha 7.5 je väčšia ako 14% pri Lo: 5.65√So. Teplota normalizačného tvárnenia je 880°C – 940°C.
Elongation after rupture acc. to PED, Annex 7.5 (not less then 14%) with Lo: 5.65√So. Temperature of Normalising forming 880°C – 940°C.
L´allungamento dopo rottura secondo PED, allegato 7.5 è superiore al 14% e Lo: 5.65 √ So. La formatura a temperatura di normalizzazione avviene ad una temperatura di 880°C – 940°C.

HRC max. 22.

Potvrdzujeme, že vstupné oceľové bloky vyrobili Železiarne Podbrezová,a.s. Slovensko.
WE DECLARE THAT THE RELEVANT BILLETS HAVE BEEN PRODUCED IN ZELEZIARNE PODBREZOVA A.S.- SLOVAKIA.
Confermiamo che le relative billette di acciaio sono state prodotto in Železiarne Podbrezová a.s.

Rádioizotopická aktivita je max. 100 Bq/kg.
Radioisotopic activity is max. 100 Bq/kg.
Massima attività radioisotopica 100 Bq/kg.

Zbytkový magnetizmus je max. 30.0 gauss.
Residual magnetism is max. 30.0 gauss.
Magnetismo residuo max. 30.0 gauss.

Systém kvality výrobcu bol podrobený špecifickému hodnoteniu pre materiály (Článok 4.3 a 7.5, Príloha I Smernice PED 2014/68/EU). Certifikát 0045/202/9150/WZ/0915/23 vydalo notifikované miesto 0045 TÜV NORD Systems GmbH s platnosťou do 02/2026. Rozsah platnosti certifikátu zahŕňa predmetné výrobky.
The producer has a specific reviewed quality system for materials according to the Article 4.3 and 7.5, Annex I of the Directive PED 2014/68/EU. The certificate 0045/202/9150/WZ/0915/23 with the validity till 02/2026 was issued by the Notified Body TÜV NORD Systems GmbH, Code 0045. The mentioned products belong to the certificate validity range.
Il produttore dispone di un sistema di controllo della qualità specifico per i materiali che corrispondono all' articolo 4.3,7.5, dell' Allegato I della Direttiva PED 2014/68/EU. Il certificato 0045/202/9150/WZ/0915/23 è valido fino al 02/2026 ed è stato rilasciato dal Centro certificazione TÜV NORD Systems GmbH, Code 0045 e copre tutti i prodotti indicati.

Miesto *Location* *Localitá*	**v Podbrezovej ma**	Dátum *Date* *Data*	**29.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
Phone: +421 48 645 3031, Fax: +421 48 645 3032, www.steeltube.sk
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ŽELEZIARNE® PODBREZOVÁ akciová spoločnosť 976 81 Podbrezová Oddelenie kontroly a zabezpečovania kvality -1-

2576/ 3402

Approved by D.MOLINARI on 02/10/23

ŽELEZIARNE® PODBREZOVÁ

Inšpekčný certifikát
Inspection certificate
Certificato di collaudo
EN 10204:2004/3.1

Číslo
Number
Numero

43826/1/2023

Všetky výrobky vyhovujú vyššie uvedeným normám a požiadavkám v objednávke.
All products meet requirements of above mentioned standards and requirements specified in the order.
Tutti i prodotti corrispondono alle norme sopra menzionate e alle specifiche richieste dall` ordine.

Vizuálna kontrola a rozmery vyhoveli (100 %).
Visual inspection and dimensional check without objections (100 %).
Ispezione e controllo dimesionale con esito soddisfacente(100 %).

Overenie základných parametrov dokumentu kontroly v informačnom systéme výrobcu ŽP a. s.:
Verification of basic parameters of inspection document in the ZP information system (Manufacturers information system):
Verifica dei parametri di base del documento di ispezione nel sistema informativo di ZP (Sistema informativo del produttore):
https://check.zelpo.sk/certchk.php?ID=37923142

Miesto *Location* *Località*	**v Podbrezovej** **ma**	Dátum *Date* *Data*	**29.09.2023**	Závodný znalec *Works Inspector* *Ispettore della fabbrica*	**Ing. Vojtas Miroslav**

Železiarne Podbrezová a.s., Kolkáreň 35, 976 81 Podbrezová, Slovak Republic
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ŽELEZIARNE® PODBREZOVÁ
akciová spoločnosť 976 81 Podbrezová
Oddelenie kontroly a zabezpečovania kvality -1-

2577/ 3402

Approved by D.MOLINARI on 02/10/23

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **72932/23** Page: **1/2**

A07	Customer's Order (P.O.) No./Item No.: **OF230556**	A08	Manufacturer's Works Order No.: **59390/0/23**
A11	Supplier's Order No.: **3151031232**	A10	Advice - Note No.: **8151006403**
B08, B12/13	Quantity delivered: pcs / bdls: **107**; mtrs / feet: **1234,870**; B13 Actual mass kgs / lbs: **24090**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **168,28 X 4,78 mm**		
B02	Steel designation: **L245/B PSL1 L290/X42 PSL1 Grade B P265GH**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes , ASME B36.10M-22,
API Spec.5L-46th edit.18 PSL1, EN 10216-2/13 +A1/19 TC1 - PED 2014/68/EU,
ASTM A106/A106M-19, ASTM A53/A53M-22, ASME SA106/SA106M-21, ASME SA53/SA53M-21- PED 2014/68/EU.
ASME II Part.D Table Y1. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-15.
Normalized hot finished (880- 1000°C), cooling on still air. **TS01 Rev. 8 LAST EDITION**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.		C	MN	SI	P	S	CU	NI	CR	ALt	MO	V	TI	NB	C_{eq}		pcs	mtrs
55773K	**H**	**0,16**	**1,13**	**0,201**	**0,014**	**0,005**	**0,08**	**0,06**	**0,03**	**0,026**	**0,012**	**0,002**	**0,002**	**<0,003**	**0,37**		**17**	**197,597**
	P	0,18	1,09	0,194	0,014	0,005	0,08	0,06	0,03	0,023	0,011	0,002	0,002	<0,001	0,37			
	P	0,17	1,09	0,194	0,014	0,005	0,08	0,06	0,03	0,023	0,011	0,002	0,002	<0,001	0,37			

Z99 X continues on page 2/2

B07 Heat No. / C04 Requirements:	C00 Specimen No.	C11 Yield Point MPa	C12 Tensile Strength MPa	C13 Elongation %	C40-43 Impact test (KCV2) Ø	min	C30-32 Hardness HRB
	P265GH	**min. 265**	**410 - 570**	**min. 23,0** (5d)			**max. 99**
	Grade B	**min. 240**	**min. 415**	**min. 22,5** (2")	**L-3,3-14J / -15°C**		
	L245/B	**min. 245**	**min. 415**	**min. 22,0** (2")			
	L290/X42	**min. 290**	**min. 415**	**min. 22,0** (2")			
55773K/1	**B / X42**	**354**	**512**	**23,0**	**41**	**40 42 41**	**79 79**
	P265GH	**366**	**521**	**25,8**			

Longitudinal strip specimen 25,4 mm

Z99 X continues on page 2/2

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	**12,4 / 10**
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT - in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X			

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018.

22HRC=99HRBmax. **Residual magnetic field [mT] max.3 - satisfactory**

QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.

Fine grain with size min. 6 according to ASTM E112 – guarantee. **L0= 5.65 X $\sqrt{SO}$ guarantee without testing.**

Impact strength is guarantee on the basis of statistical data evaluation (28J/-10°C).

Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.

Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1. **MANUFACTURER OF BILLETS: LIBERTY OSTRAVA**

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **13.09.2023/JN**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4
58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

Approved by QUALITY1 on 13/09/23

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LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **72932/23**

C71-92 Heat (H) and product (P) chemical analyses (%) — C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	MO	V	TI	NB	C_{eq}		pcs	mtrs
56601KU	**H**	**0,17**	**1,13**	**0,202**	**0,018**	**0,008**	**0,09**	**0,03**	**0,04**	**0,024**	**0,007**	**0,002**	**0,002**	**<0,003**	**0,37**		**90**	**1037,273**
	P	0,16	1,11	0,201	0,018	0,008	0,08	0,03	0,04	0,024	0,007	0,001	0,002	<0,001	0,37			
	P	0,17	1,11	0,200	0,018	0,008	0,08	0,03	0,04	0,023	0,006	0,001	0,002	<0,001	0,37			

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test				C30-32 Hardness	
56601KU/1	**B / X42**	**385**	**541**	**29,9**	**39**	**40**	**38**	**38**	**79**	**79**
	P265GH	**370**	**537**	**28,7**						
56601KU/2	**B / X42**	**352**	**514**	**27,7**	"	"	"	"	"	"
	P265GH	**376**	**501**	**25,5**						

Z02 Date of issue **13.09.2023/JN**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4
58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

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Approved by QUALITY1 on 13/09/23

ROSETTI MARINO S.P.A. P.O. 1723002029 123A30 TAL JOB N°323002954
N° 2 MT 23 HEAT 55061KU DIMENSIONS 168.3 X 4.78

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **72932/23** Page: **1/2**

A07	Customer's Order (P.O.) No./Item No.: **OF230556**	A08	Manufacturer's Works Order No.: **59390/0/23**
A11	Supplier's Order No.: **3151031232**	A10	Advice - Note No.: **8151006403**
B08, B12/13	Quantity delivered: pcs / bdls: **107**; mtrs / feet: **1234,870**; B13 Actual mass kgs / lbs: **24090**	A06	Customer / Consignee: **T.A.L. S.P.A. TUBI ACCIAIO LOMBARDA con socio unico VIA G.DI VITTORIO 29017 FIORENZUOLA DARDA Italy**
B09-11	Dimensions: **168,28 X 4,78 mm**		
B02	Steel designation: **L245/B PSL1 L290/X42 PSL1 Grade B P265GH**		

B01, B03, B04 Product, conditions and terms of delivery:

Seamless steel tubes , ASME B36.10M-22,
API Spec.5L-46th edit.18 PSL1, EN 10216-2/13 +A1/19 TC1 - PED 2014/68/EU,
ASTM A106/A106M-19, ASTM A53/A53M-22, ASME SA106/SA106M-21, ASME SA53/SA53M-21- PED 2014/68/EU.
ASME II Part.D Table Y1. ANSI/NACE MR0175/ISO 15156-15, ANSI/NACE MR0103/ISO 17945-15.
Normalized hot finished (880- 1000°C), cooling on still air. **TS01 Rev. 8 LAST EDITION**

A04, B06 Marking: Manufacturer's mark, mill inspector's stamp

LIBERTY OSTRAVA 2 3

C71-92 Heat (H) and product (P) chemical analyses (%) C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.		C	MN	SI	P	S	CU	NI	CR	ALt	MO	V	TI	NB	C_{eq}		pcs	mtrs
55773K	**H**	**0,16**	**1,13**	**0,201**	**0,014**	**0,005**	**0,08**	**0,06**	**0,03**	**0,026**	**0,012**	**0,002**	**0,002**	**<0,003**	**0,37**		**17**	**197,597**
	P	0,18	1,09	0,194	0,014	0,005	0,08	0,06	0,03	0,023	0,011	0,002	0,002	<0,001	0,37			
	P	0,17	1,09	0,194	0,014	0,005	0,08	0,06	0,03	0,023	0,011	0,002	0,002	<0,001	0,37			

Z99 X continues on page 2/2

B07 Heat No. / C04 Requirements:	Specimen No.	C11 Yield Point MPa	C12 Tensile Strength MPa	C13 Elongation %	C40-43 Impact test (KCV2) Ø	min	C30-32 Hardness HRB
		min. 265	**410 - 570**	**min. 23,0** (5d)			**max. 99**
		min. 240	**min. 415**	**min. 22,5** (2")	**L-3,3-14J / -15°C**		
		min. 245	**min. 415**	**min. 22,0** (2")			
		min. 290	**min. 415**	**min. 22,0** (2")			
		Longitudinal strip specimen 25,4 mm					
55773K/1	**B / X42**	**354**	**512**	**23,0**	**41**	**40 42 41**	**79 79**
	P265GH	**366**	**521**	**25,8**			

Z99 X continues on page 2/2

D01	Visual and dimensional inspection with satisfactory results	X	D51	Hydrostatic test - min. test pressure MPa / sec.	**12,4 / 10**
C50	Flattening test - satisfactory	X	D02	The pipes tested on tightness by NDT - in acc. to	
C51	Expanding test - satisfactory				
C52	Bending test - satisfactory				
C53	Ring expanding test - satisfactory		D03	Nondestructive Electromagnetic Testing	
C54	Ring tensile test (EN ISO 8496) - satisfactory	X			

The manufacturer has an established and certified management system according to ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018.

22HRC=99HRBmax. **Residual magnetic field [mT] max.3 - satisfactory**
QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 and AD 2000-Mbl. W0 by TÜV NORD Systems GmbH & Co. KG. Welding process, personnel for welding and NDT are approved acc. to PED 2014/68/EU.
Fine grain with size min. 6 according to ASTM E112 – guarantee. **L0= 5.65 X $\sqrt{SO}$ guarantee without testing.**
Impact strength is guarantee on the basis of statistical data evaluation (28J/-10°C).
Mass activity value of the ionising radiation in the heat analysis does not exceed 100 Bq/kg.
Guarantee of tensile properties acc.to ASME Sec.II Part.D Table Y1. **MANUFACTURER OF BILLETS: LIBERTY OSTRAVA**

Z01 All pipes conform to the above mentioned standards and ordering requirements and agreements.

Z02 Date of issue **13.09.2023/JN**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

2580/ 3402

Approved by QUALITY1 on 13/09/23

ROSETTI MARINO S.P.A. P.O. 1723002029 123A30 TAL JOB N°323002954
N° 2 MT 23 HEAT 55061KU DIMENSIONS 168.3 X 4.78

LIBERTY

A02 **Inspection certificate "3.1" (EN 10 204)**

A03 Document No.: **72932/23**

C71-92 Heat (H) and product (P) chemical analyses (%) | C70 Steel made by basic oxygen process, fully killed, strand cast.

B07 Heat No.:		C	MN	SI	P	S	CU	NI	CR	ALt	MO	V	TI	NB	C_{eq}		pcs	mtrs
56601KU	**H**	**0,17**	**1,13**	**0,202**	**0,018**	**0,008**	**0,09**	**0,03**	**0,04**	**0,024**	**0,007**	**0,002**	**0,002**	**<0,003**	**0,37**		**90**	**1037,273**
	P	0,16	1,11	0,201	0,018	0,008	0,08	0,03	0,04	0,024	0,007	0,001	0,002	<0,001	0,37			
	P	0,17	1,11	0,200	0,018	0,008	0,08	0,03	0,04	0,023	0,006	0,001	0,002	<0,001	0,37			

B07 Test results: Heat No.	C00 Specimen No.	MPa C11 Yield Point	MPa C12 Tensile Strength	% C13 Elongation	C40-43 Impact Test				C30-32 Hardness	
56601KU/1	**B / X42**	**385**	**541**	**29,9**	**39**	**40**	**38**	**38**	**79**	**79**
	P265GH	**370**	**537**	**28,7**						
56601KU/2	**B / X42**	**352**	**514**	**27,7**	"	"	"	"	"	"
	P265GH	**376**	**501**	**25,5**						

Z02 Date of issue **13.09.2023/JN**

Tel.:++420 595683644

A01 Liberty Ostrava a.s.
A05 QA Department
Vratimovská 689/117
719 00 Ostrava-Kunčice
Czech Republic

LIBERTY
Liberty Ostrava a.s.
Vratimovská 689/117, 719 00 Ostrava - Kunčice
QA - WORKS INSPECTOR
IDENTIFICATION No. 4

58

Bc. Petr Pastucha
Work's Inspector
Z02 Validation

E.z. 2574/16/15/P

2581/ 3402

Approved by QUALITY1 on 13/09/23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301762

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

29.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000451983-1723001808 129A90A 3-0000400531

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000451983

ordine cliente:
customer order: 1723001808 129A90A 3

documento di trasporto:
document of trasport DDT 0000400531

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

29/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80614075

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80614075
DDT	400531
OdV	451983
Riferimento Cliente	1723001808 129A90A 3
	Quantità in UMB (NO BDG)
	PZ
	39

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	40	374	#	IPE3303521572	131660A;	4
900002	50	389	#	IPE3303521710	131660A;	4
900003	60	398	#	IPE3303521467	131660A;	4
900004	70	370	#	IPE3303521715	131660A;	3
900005	80	394	#	IPE3303521128	131660A;	2
900006	90	397	#	IPE3303521128	131660A;	2
900007	100	367	#	IPE3303521297	131660A;	2
900008	110	371	#	IPE3303521491	131660A;	2
900009	110	371	#	IPE3303521491	70799;	1
900010	120	390	#	IPE3303521710	131660A;	2
900011	130	404	#	IPE3303521710	70799;	1
900012	140	415	#	IPE3303521624	70799;	1
900013	150	419	#	IPE2403521486	70716;	1
900014	160	424	#	IPE2403521491	70716;	3
900016	10	369	#	HEA3403521412	72415;	3
900017	20	368	#	HEA3403521272	72410;	2
900018	30	372	#	HEA3403521272	72410;	1
900019	170	380	#	HEA5003521487	66714;	1

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 661 2022 **del** 28/03/22

Pag. 1

Your Ref.: OSC2280064 / 15/02/22

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

000992

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 131660A

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/661

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*										
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*										
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*										
HEA 260		S275J0 +AR	1	15,10	0,15	0,65	0,19	0,007	0,0070	0,006	0,030	0,008	0,270
EN 10365		EN10025-2/EN10034	6	6.138	0,040	0,010	0,001	0,002		0,020			
No. A25714C	G	OSC2280051		42/000312	275	422	32	10,0	200,0	197,0	195,0	197,3	0
HEA 260		S275J0 +AR	1	15,10	0,14	0,68	0,18	0,009	0,0080	0,007	0,020	0,009	0,260
EN 10365		EN10025-2/EN10034	6	6.138	0,040	0,010	0,002	0,002		0,020			
No. A40091A	G	OSC2280051		42/000312	276	422	35	10,0	180,0	210,0	182,0	190,7	0
HEA 220		S355J2 +AR	1	14,10	0,15	1,29	0,22	0,014	0,0110	0,023	0,372	0,009	0,443
EN 10365		EN 10025-2/EN10034	9	6.366	0,120	0,150	0,055	0,004	0,001	0,023	0,022	0,0003	
No. 131857A	G	OSC2280052		42/000316	372	531	33	7,5	122,0	126,0	137,0	128,3	- 20
IPE 330		S355J2 +AR	1	14,10	0,15	1,22	0,22	0,018	0,0050	0,022	0,508	0,010	0,438
EN 10365		EN 10025-2/EN10034	10	6.878	0,139	0,169	0,034	0,003	0,002	0,025	0,019	0,0003	
No. 131660A	G	OSC2280064		42/000357	406	549	31	7,5	125,0	107,0	123,0	118,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2586/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2022 DDT / GU/661

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	S275JR/J0/J2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21

02 N° 2022 DDT / GU/661

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2022 **GU/661**

2588/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2022 DDT / GU/661

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*
Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

03 N° 2022 DDT / GU/661

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2022 **GU/661**

2590/ 3402

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 70799

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2592/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 101/7-2023
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
28	70798	IPE 330	EN 10365	18.100 mm	4	3.550 kg
28	70799	IPE 330	EN 10365	18.100 mm	20	17.795 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70798	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08
70799	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70798	0,29	0,12	0,03	0,022	0,39
70799	0,29	0,12	0,03	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70798	434	539	28,0	
70799	437	542	30,0	

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
23

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 101/7-2023**
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
70798	KV 450	L	-20 °C	19 / 27	47	75	42	54
70799	KV 450	L	-20 °C	19 / 27	55	58	41	51

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
23

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 70716

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2595/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2596/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2790/6-2023**
Advice No. 800150897

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
26	70716	IPE 240	EN 10365	18.100 mm	48	26.475 kg
26	70717	IPE 240	EN 10365	18.100 mm	8	4.420 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70716	0,10	0,18	1,44	0,016	0,016	0,009	0,016	0,039	0,007	0,09
70717	0,10	0,18	1,42	0,016	0,016	0,010	0,016	0,040	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70716	0,29	0,14	0,03	0,022	0,39
70717	0,27	0,13	0,04	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70716	402	559	25,0	
70717	392	546	26,0	

Z03 Works inspector
René Merbach

Z02 29.06.2023

Z04

CE
0769
23

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2790/6-2023**
Advice No. 800150897

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
70716	KV 450/7.5	L	-20 °C	14 / 20	109	105	109	107
70717	KV 450/7.5	L	-20 °C	14 / 20	157	59	121	112

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 29.06.2023

Z04

CE

0769
23

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 72415

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2599/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2600/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2200/9-2023
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	72412	HE 340A	EN 10365	18.100 mm	2	3.800 kg
2	72415	HE 340A	EN 10365	18.100 mm	4	7.600 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72412	0,09	0,19	1,45	0,020	0,020	0,008	0,014	0,041	0,009	0,08
72415	0,07	0,18	1,43	0,018	0,021	0,010	0,016	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72412	0,28	0,14	0,03	0,024	0,38
72415	0,31	0,12	0,03	0,021	0,36

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72412	409	528	33,0	
72415	407	514	32,0	

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2200/9-2023**
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
72412	KV 450	L	-20 °C	19 / 27	74	115	104	97
72415	KV 450	L	-20 °C	19 / 27	132	135	137	134

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 72410

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2603/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2604/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2515/9-2023
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
6	72410	HE 340A	EN 10365	20.100 mm	3	6.325 kg
6	72411	HE 340A	EN 10365	20.100 mm	2	4.220 kg
7	72410	HE 340A	EN 10365	24.100 mm	4	10.080 kg
9	72452	HE 400A	EN 10365	24.100 mm	2	5.980 kg
9	72453	HE 400A	EN 10365	24.100 mm	2	5.975 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72410	0,09	0,18	1,45	0,025	0,019	0,008	0,011	0,039	0,008	0,11
72411	0,09	0,20	1,45	0,020	0,019	0,008	0,015	0,040	0,009	0,11
72452	0,08	0,20	1,44	0,019	0,021	0,009	0,015	0,040	0,008	0,09
72453	0,09	0,20	1,43	0,018	0,017	0,009	0,015	0,040	0,009	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72410	0,34	0,15	0,03	0,023	0,39
72411	0,29	0,12	0,03	0,025	0,39
72452	0,21	0,13	0,03	0,023	0,37
72453	0,21	0,14	0,03	0,022	0,38

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

B07 Heat No.	C11 Yield stress [N/mm2]	C12 Tensile strength [N/mm2]	C13 Elongation $5.65\sqrt{S_0}$ [%]	C14
max		630		
min	345	470	22,0	
72410	409	541	32,0	
72411	413	541	31,0	
72452	405	502	34,0	
72453	397	503	34,0	

Impact test (ISO 148-1)

B07 Heat No.	C40/C41 Type/Shape	C02 Direction	C03 Temperature	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72410	KV 450	L	-20 °C	19 / 27	89	124	92	101
72411	KV 450	L	-20 °C	19 / 27	115	120	61	98
72452	KV 450	L	-20 °C	19 / 27	156	171	178	168
72453	KV 450	L	-20 °C	19 / 27	161	160	164	161

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE
0769
23

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451983
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000400531
PLACCA/COLATA: 66714

Mill Test Certificate Nr X 5000341

Delivery note number 5000341 from 2 December 2023 A03

A08 Our reference : 1100683864
A07 Your reference : OSC2380422
06.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000005	HE 500 A	24.100 mm	11,358 to	66710	7,572 to		2
				66714	3,786 to		1

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
66710	0,06	0,86	0,024	0,021	0,18	0,007	0,004	0,30	0,14	0,15	0,030	0,008	0,030	0,001	0,0005	0,27	0,023
66714	0,07	0,90	0,024	0,015	0,19	0,007	0,004	0,32	0,16	0,12	0,030	0,008	0,040	0,001	0,0005	0,29	0,023

B07 Heat nr	Tensile test N/mm2 ReH C11	Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	mm C02	°C C41	1 C03	2 C42	3	M C43
Min	345	470	22,00	FL.1/3	L	-20		19		27
Max		630								
66710	473	563	25,40	FL.1/3	L	-20	166	162	148	159
66714	459	546	26,68	FL.1/3	L	-20	139	159	166	155

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

2608/3402

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 5000341

Delivery note number 5000341 from 2 December 2023 A03

A08 Our reference : 1100683864

A07 Your reference : OSC2380422
06.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 5000341

Delivery note number 5000341 from 2 December 2023 A03

A08 Our reference : 1100683864

A07 Your reference : OSC2380422
06.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 300 M	18.100 mm	4,366 to	66618	4,366 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
66618		0,06	0,88	0,029	0,016	0,18	0,010	0,003	0,28	0,13	0,13	0,032	0,007	0,020	0,001	0,0005	0,27

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
66618		467	559	24,13	FL.1/3	L		-20	167	184	125	159

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

2610/3402

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate Nr X 5000341

Delivery note number 5000341 from 2 December 2023 A03

A08 Our reference : 1100683864

A07 Your reference : OSC2380422
06.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301767

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **01.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000446040-1723001808 123A90A.-0000400643

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000446040

ordine cliente:
customer order: 1723001808 123A90A.

documento di trasporto:
document of trasport DDT 0000400643

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

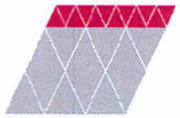
01/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
OdV	446040		30	MSTR	323	#	HEA3403523982	72410;	400643	31.01.2024	3
	Quantità		50	MSTR	174	#	HEA3403523982	72410;	400643	31.01.2024	2
Comm	044	**Risultato**	60	MSTR	180	#	HEA3403523982	72410;	400643	31.01.2024	3



MANNI SIPRE
STEEL ENGINEERING

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000446040
RIF. ORDINE: 1723001808 123A90A
DDT: 0000400643
PLACCA/COLATA: 72410

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2617/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
6	72410	HE 340A	EN 10365	20.100 mm	3	6.325 kg
6	72411	HE 340A	EN 10365	20.100 mm	2	4.220 kg
7	72410	HE 340A	EN 10365	24.100 mm	4	10.080 kg
9	72452	HE 400A	EN 10365	24.100 mm	2	5.980 kg
9	72453	HE 400A	EN 10365	24.100 mm	2	5.975 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72410	0,09	0,18	1,45	0,025	0,019	0,008	0,011	0,039	0,008	0,11
72411	0,09	0,20	1,45	0,020	0,019	0,008	0,015	0,040	0,009	0,11
72452	0,08	0,20	1,44	0,019	0,021	0,009	0,015	0,040	0,008	0,09
72453	0,09	0,20	1,43	0,018	0,017	0,009	0,015	0,040	0,009	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72410	0,34	0,15	0,03	0,023	0,39
72411	0,29	0,12	0,03	0,025	0,39
72452	0,21	0,13	0,03	0,023	0,37
72453	0,21	0,14	0,03	0,022	0,38

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

032 CPR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72410	409	541	32,0	
72411	413	541	31,0	
72452	405	502	34,0	
72453	397	503	34,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72410	KV 450	L	-20 °C	19 / 27	89	124	92	101
72411	KV 450	L	-20 °C	19 / 27	115	120	61	98
72452	KV 450	L	-20 °C	19 / 27	156	171	178	168
72453	KV 450	L	-20 °C	19 / 27	161	160	164	161

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE
0769
23

032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

032 CPR 2020-10-01 SWT

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301768

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **01.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000448420-1723001808 129A90A.-0000400644

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000448420

ordine cliente:
customer order: 1723001808 129A90A.

documento di trasporto:
document of trasport DDT 0000400644

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 037 3890011 | F. +39 037 382364
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63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

01/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

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33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

#VALORE!	#VALORE!

Cliente	1500011109	
	ROSETTI MARINO S.P.A.	
OdV	448420	
Riferiment	1723001808 129A90A.	
	Quantità	
Comm	044	**Risultato**
	CHRISTIAN CELADON	

								Qtà
Pos.OdV	**Materiale**	**Mark**	**Mark2**	**Descrizione**	**Colata**	**DDT**	**Data**	PZ
10	MSTR	173	#	HEA3403523982	63746;	400644	31.01.2024	1
20	MSTR	178	#	HEA3403523982	63746;	400644	31.01.2024	1
30	MSTR	181	#	HEA3403523982	61130;	400644	31.01.2024	1
40	MSTR	229	#	HEA3403521807	61130;	400644	31.01.2024	1
50	MSTR	265	#	HEA3403522072	61769;	400644	31.01.2024	1
60	MSTR	268	#	HEA3403521807	61229;	400644	31.01.2024	1
70	MSTR	269	#	HEA3403521807	61229;	400644	31.01.2024	1
80	MSTR	270	#	HEA3403521807	61229;	400644	31.01.2024	1
90	MSTR	327	#	HEA3403523982	61229;	400644	31.01.2024	1
100	MSTR	331	#	HEA3403523985	61769;	400644	31.01.2024	1
					68668;	400644	31.01.2024	1

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

S275J0+ M ACCORDING TO EN 10025-2/2019 SUITABLE FOR GALVANIZING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448420
RIF. ORDINE: 1723001808 129A90A.
DDT: 0000400644
PLACCA/COLATA: 61769

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

Mill Test Certificate NrX 4837376

Delivery note number 4837376 from 15 April 2023 A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 450 A	24.100 mm	3,314 to	72123	3,314 to		1
000003	HE 500 B	20.100 mm	11,073 to	62144	11,073 to		3
000004	HE 500 B	24.100 mm	13,275 to	62143	13,275 to		3

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,18	1,50	0,035	0,035	0,25			0,55								0,40
62143	0,06	0,67	0,024	0,027	0,17	0,011	0,003	0,37	0,16	0,17	0,007	0,002	0,050	0,001	0,0005	0,25
62144	0,07	0,64	0,019	0,020	0,18	0,012	0,004	0,32	0,15	0,12	0,006	0,001	0,040	0,001	0,0004	0,24
72123	0,07	0,88	0,016	0,014	0,21	0,011	0,015	0,19	0,12	0,10	0,019	0,007	0,030	0,001	0,0005	0,27

B07 Heat nr	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	C40 KV Position C01		mm C02	UNAGED °C C41	C03	J 1 C42	2	3	M C43
Min	265	410	23,00	FL.1/3	L		0		19			27
Max		560										
62143	332	458	31,17	FL.1/3	L		0	112	124	134	123	
62144	385	489	26,58	FL.1/3	L		0	146	134	162	147	
72123	367	447	31,42	FL.1/3	L		0	188	201	201	197	

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0143 / DOP: AMDI-2/05-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4837376
Delivery note number 4837376 from 15 April 2023 A03

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S275J0+ M ACCORDING TO EN 10025-2/2019 SUITABLE FOR GALVANIZING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06

UK CA 0038 21

Code of the product type: 1.0143 / DOP: AMDI-2/05-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4837376
Delivery note number 4837376 from 15 April 2023 A03

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000023	HE 340 A	20.100 mm	2,072 to	61769	2,072 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
61769		0,07	0,90	0,025	0,024	0,17	0,009	0,003	0,35	0,17	0,09	0,032	0,007	0,040	0,001	0,0005	0,29

Heat nr		Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	Charpy impact test C40 KV Position	mm	UNAGED °C	J 1	2	3	M
B07		C11	C12	C13	C01 C02	C41	C03	C42			C43
	Min	345	470	22,00	FL.1/3 L		-20		19		27
	Max		630								
61769		408	492	29,29	FL.1/3 L		-20	168	182	177	176

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4837376

Delivery note number 4837376 from 15 April 2023 A03

A08 Our reference : 1100668886

A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4837376
Delivery note number 4837376 from 15 April 2023 A03

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000018	HE 500 M	24.100 mm	6,390 to	62154	6,390 to		1

B07 Heat nr		Heat analysis (%)															
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,22	1,60	0,030	0,030	0,25			0,55					0,110			0,45
62154		0,07	0,91	0,022	0,018	0,21	0,010	0,005	0,34	0,15	0,11	0,034	0,008	0,030	0,001	0,0005	0,29

Heat nr		Tensile test			Charpy impact test							
		N/mm2	N/mm2	5,65VS	C40 KV		UNAGED			J		
		ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07		C11	C12	C13	C01	C02	C41	C03	C42			C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
62154		420	530	23,99	FL.1/3	L		-20	75	52	139	89

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4837376
Delivery note number 4837376 from 15 April 2023 A03

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448420
RIF. ORDINE: 1723001808 129A90A.
DDT: 0000400644
PLACCA/COLATA: 68668

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2632/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026248
A07 Your Order No.: OSC2370170

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1732/4-2023**
Advice No. 800145503

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
8	68683	HE 320A	EN 10365	18.100 mm	3	5.270 kg
9	68668	HE 340A	EN 10365	20.100 mm	3	6.300 kg
10	68668	HE 340A	EN 10365	24.100 mm	6	15.040 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
68668	0,09	0,19	1,49	0,020	0,020	0,010	0,014	0,042	0,009	0,07
68683	0,08	0,18	1,44	0,016	0,020	0,011	0,015	0,040	0,009	0,09

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
68668	0,24	0,10	0,02	0,023	0,38
68683	0,31	0,16	0,04	0,024	0,38

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68668	401	525	30,0	
68683	417	525	32,0	

*Yield stress <16mm/<40mm

Z03 Works inspector
René Merbach

Z02 24.04.2023

Z04

CE

0769
23
032 GBR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026248
A07 Your Order No.: OSC2370170

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1732/4-2023**
Advice No. 800145503

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
68668	KV 450	L	-20 °C	19 / 27	78	114	80	90
68683	KV 450	L	-20 °C	19 / 27	153	156	164	157

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 24.04.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448420
RIF. ORDINE: 1723001808 129A90A.
DDT: 0000400644
PLACCA/COLATA: 63746

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2636/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023060
A07 Your Order No.: OSC2270443

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 398/11-2022**
Advice No. 800130696

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	63750	HE 340A	EN 10365	20.100 mm	4	8.400 kg
5	63751	HE 340A	EN 10365	20.100 mm	1	2.105 kg
6	63746	HE 340A	EN 10365	24.100 mm	2	5.000 kg
6	63748	HE 340A	EN 10365	24.100 mm	2	4.995 kg
6	63749	HE 340A	EN 10365	24.100 mm	2	5.000 kg
18	63685	IPE 450	EN 10365	20.100 mm	3	4.655 kg
18	63686	IPE 450	EN 10365	20.100 mm	6	9.320 kg
18	63687	IPE 450	EN 10365	20.100 mm	2	3.120 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
63685	0,09	0,19	1,41	0,019	0,017	0,011	0,017	0,038	0,008	0,10
63686	0,10	0,20	1,40	0,016	0,017	0,010	0,016	0,040	0,008	0,09
63687	0,10	0,20	1,40	0,016	0,017	0,010	0,016	0,040	0,008	0,09
63746	0,08	0,19	1,43	0,013	0,018	0,012	0,015	0,039	0,007	0,06
63748	0,08	0,17	1,42	0,020	0,023	0,011	0,016	0,038	0,007	0,06
63749	0,10	0,22	1,39	0,018	0,009	0,011	0,021	0,039	0,007	0,08
63750	0,08	0,18	1,42	0,012	0,009	0,011	0,016	0,039	0,008	0,06
63751	0,08	0,19	1,41	0,019	0,019	0,011	0,017	0,037	0,007	0,10

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
63685	0,25	0,12	0,03	0,022	0,38
63686	0,24	0,12	0,03	0,023	0,38
63687	0,24	0,12	0,03	0,023	0,38

Z03 Works inspector
René Merbach



Z02 04.11.2022

Z04

CE

0769
22

032 OSP-0220-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023060
A07 Your Order No.: OSC2270443

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 398/11-2022**
Advice No. 800130696

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
63746	0,14	0,09	0,02	0,021	0,35
63748	0,23	0,12	0,03	0,018	0,36
63749	0,25	0,12	0,03	0,016	0,38
63750	0,18	0,12	0,03	0,022	0,36
63751	0,31	0,16	0,03	0,023	0,37

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
63685	405	540	31,0	
63686	401	533	30,0	
63687	416	537	31,0	
63746	405	501	35,0	
63748	404	504	32,0	
63749	431	531	34,0	
63750	420	533	34,0	
63751	391	501	33,0	

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
63685	KV 450	L	-20 °C	19 / 27	120	94	108	107
63686	KV 450	L	-20 °C	19 / 27	123	95	57	91

Z03 Works inspector
René Merbach

Z02 04.11.2022

Z04

CE

0769
22
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023060
A07 Your Order No.: OSC2270443

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 398/11-2022**
Advice No. 800130696

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
63687	KV 450	L	-20 °C	19 / 27	126	126	82	111
63746	KV 450	L	-20 °C	19 / 27	146	158	168	157
63748	KV 450	L	-20 °C	19 / 27	136	108	131	125
63749	KV 450	L	-20 °C	19 / 27	167	145	141	151
63750	KV 450	L	-20 °C	19 / 27	151	151	150	150
63751	KV 450	L	-20 °C	19 / 27	131	115	146	130

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 04.11.2022

Z04

CE

0769
22

032 CPR 202201021 SWT

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100668886
A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448420
RIF. ORDINE: 1723001808 129A90A.
DDT: 0000400644
PLACCA/COLATA: 61130

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

Mill Test Certificate NrX 4821456

Delivery note number 4821456 from 26 March 2023 A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000023	HE 340 A	20.100 mm	2,138 to	61130	2,138 to		1
000025	HE 650 A	18.100 mm	6,970 to	61471	3,485 to		1
				61488	3,485 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
61130		0,07	0,88	0,024	0,020	0,19	0,011	0,004	0,37	0,17	0,11	0,030	0,006	0,040	0,001	0,0005	0,29
61471		0,08	0,72	0,021	0,015	0,20	0,011	0,004	0,35	0,15	0,11	0,033	0,001	0,040	0,001	0,0004	0,27
61488		0,07	0,90	0,022	0,016	0,20	0,012	0,004	0,32	0,16	0,12	0,031	0,007	0,050	0,001	0,0005	0,29

Heat nr B07		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
61130		459	537	24,78	FL.1/3	L		-20	169	173	155	166
61471		480	573	26,05	FL.1/3	L		-20	120	150	161	144
61488		462	544	24,90	FL.1/3	L		-20	130	160	173	154

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4821456

Delivery note number 4821456 from 26 March 2023 A03

A08 Our reference : 1100668886

A07 Your reference : OSC2380129
08.03.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

2641/3402

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448420
RIF. ORDINE: 1723001808 129A90A.
DDT: 0000400644
PLACCA/COLATA: 61229

Mill Test Certificate Nr X 4814334

Delivery note number 4814334 from 15 March 2023 A03

A08 Our reference : 1100664369
A07 Your reference : OSC2380010
17.01.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S275J0+ M ACCORDING TO EN 10025-2/2019 SUITABLE FOR GALVANIZING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000006	HE 450 B	24.100 mm	8,184 to	71219	8,184 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,18	1,50	0,035	0,035	0,25			0,55								0,40
71219		0,06	0,76	0,027	0,018	0,16	0,011	0,004	0,34	0,16	0,10	0,006	0,007	0,040	0,001	0,0004	0,25

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
B07												
	Min	265	410	23,00	FL.1/3	L		0		19		27
	Max		560									
71219		342	427	31,74	FL.1/3	L		0	180	184	184	183

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0143 / DOP: AMDI-2/05-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4814334

Delivery note number 4814334 from 15 March 2023 A03

A08 Our reference : 1100664369

A07 Your reference : OSC2380010
17.01.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S275J0+ M ACCORDING TO EN 10025-2/2019 SUITABLE FOR GALVANIZING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0143 / DOP: AMDI-2/05-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4814334
Delivery note number 4814334 from 15 March 2023 A03

A08 Our reference : 1100664369
A07 Your reference : OSC2380010
17.01.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000013	HE 340 A	20.100 mm	4,190 to	61229	4,190 to		2

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
61229		0,06	0,84	0,023	0,014	0,17	0,012	0,004	0,29	0,14	0,14	0,032	0,007	0,040	0,001	0,0004	0,27

Heat nr		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV UNAGED J Position C01	C02	mm C41	°C C03	1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
61229		464	544	25,47	FL.1/3	L		-20	173	171	179	174

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4814334
Delivery note number 4814334 from 15 March 2023 A03

A08 Our reference : 1100664369
A07 Your reference : OSC2380010
17.01.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301787

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

07.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000448457-1723001808 129A90A-0000201392

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000448457

ordine cliente:
customer order: 1723001808 129A90A

documento di trasporto:
document of trasport DDT 0000201392

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

06/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: CE248330

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE330 L.15.1M	CE248329	0,100	1,170	0,170	0,025	0,026	0,170	0,130	0,400	0,022	0,031	0,008	0,001	0,0134	0,001	0,379	397	524	29,1
S 355 J2 +M IPE330 L.15.1M	CE248330	0,090	1,130	0,170	0,026	0,026	0,160	0,130	0,400	0,021	0,031	0,008	0,001	0,0119	0,001	0,356	393	518	30,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE330 L.15.1M	CE248329	130	100	106	112	-20
S 355 J2 +M IPE330 L.15.1M	CE248330	125	95	101	107	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 21.11.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202275076

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10831011				Su pedido: OSC2361415			
	9402440076	BETM-330X15.1	3	S355J2 + M IPE330 L.15.1M		CE248329	2.177 KG
	9402440075	BETM-330X15.1	4	S355J2 + M IPE330 L.15.1M		CE248329	2.913 KG
	9402440074	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248329	4.354 KG
	9402440073	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248330	4.354 KG
10833640				Su pedido: OSC2361513			
	9402439551	BBTM-160X12.1	5	S355J2 + M HEB160 L.12.1 M		CE248173	2.540 KG
	9402439549	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.596 KG
	9402439548	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.606 KG
TOTAL			42				25.540 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001403065 / 839375

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: 9491KHJ / XA482CV

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
21	11	2023	X5735658X	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: 219914

AENOR ACERO ESTRUCTURAL 0086 CPR 753114 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19769680102627	**IPE 330**	**9,1 m.**	**10**	**219914**	**4.371**

1 paquetes **10 barras** **4.371 Kg**

TRANSPORTISTA

AMGEL VAZQUEZ FERNANDEZ

N.I.F. 35777488E

OPERADOR DE TRANSPORTE

AMBROGIO TRASPORTI, S.P.A.
VIA F.LLI KENNEDY 1
10048 VINOVO
ITALIA
V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1765516

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	219914	,06	,95	,19	,017	,021	,012	,004	,130	,360	,180	,024	,026						,28

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C00	C03	C40/41	C42			C43
IPE-330	219914	386	479	32,5		-20º	7,5	150	161	156	156

1 / 1 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Responsable del Departamento de Calidad Z01

Jose Maria Galindo

TRANSPORTISTA
AMGEL VAZQUEZ FERNANDEZ N.I.F. 35777488E

OPERADOR DE TRANSPORTE
AMBROGIO TRASPORTI, S.P.A. VIA F.LLI KENNEDY 1 10048 VINOVO ITALIA V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
manuela.bruni@mannigroup.com
COVER MATERIAL

Ref: 1100668894

TRANSPORTISTA

AMGEL VAZQUEZ FERNANDEZ

N.I.F. 35777488E

OPERADOR DE TRANSPORTE

AMBROGIO TRASPORTI, S.P.A.
VIA F.LLI KENNEDY 1
10048 VINOVO
ITALIA
V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: CE248329

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE330 L.15.1M	CE248329	0,100	1,170	0,170	0,025	0,026	0,170	0,130	0,400	0,022	0,031	0,008	0,001	0,0134	0,001	0,379	397	524	29,1
S 355 J2 +M IPE330 L.15.1M	CE248330	0,090	1,130	0,170	0,026	0,026	0,160	0,130	0,400	0,021	0,031	0,008	0,001	0,0119	0,001	0,356	393	518	30,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP™ CELSA BARCELONA

Sostenibilidad Siderúrgica Gestión RSE SGSS - 001/2010

CE 0099 06 CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE330 L.15.1M	CE248329	130	100	106	112	-20
S 355 J2 +M IPE330 L.15.1M	CE248330	125	95	101	107	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA
COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 21.11.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202275076

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:
MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10831011				Su pedido: OSC2361415			
	9402440076	BETM-330X15.1	3	S355J2 + M IPE330 L.15.1M		CE248329	2.177 KG
	9402440075	BETM-330X15.1	4	S355J2 + M IPE330 L.15.1M		CE248329	2.913 KG
	9402440074	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248329	4.354 KG
	9402440073	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248330	4.354 KG
10833640				Su pedido: OSC2361513			
	9402439551	BBTM-160X12.1	5	S355J2 + M HEB160 L.12.1 M		CE248173	2.540 KG
	9402439549	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.596 KG
	9402439548	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.606 KG
TOTAL			42				25.540 KG

■ Cita Cliente: Imprescindible confirmar
Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001403065 / 839375

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: 9491KHJ / XA482CV

CLIENTE / CUSTOMER: 1670285
Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
21	11	2023	X5735658X	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

A01 Nr rejestrowy BDO : 000012617

ArcelorMittal Poland S.A.
Oddział w Dąbrowie Górniczej
al. J. Piłsudskiego 92
41-308 Dąbrowa Górnicza

A02

ŚWIADECTWO ODBIORU 3.1
INSPECTION CERTIFICATE 3.1
ABNAHMEPRÜFZEUGNIS 3.1

EN 10204 Nr: **1003407813**

Z01.1 Dąbrowa Górnicza

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: 105716

ArcelorMittal

A06.1
Zamawiający: **ARCELORMITTAL COMMERCIAL ITALY SRL**
Purchaser: **20139 MILANO** **Włochy / Italy / Italien**
Besteller: **VIALE BRENTA 27/29 VIALE BRENTA 27/29**

A06.2
Adres wysyłkowy: **MANNISIPRE s.p.a. 401041**
Address: **37060 MOZZECANE Włochy / Italy / Italien**
Versandadresse: **Via I Maggio**

A07	Nr zamówienia klienta / No of purchase order / No der Bestellung	Nr kontraktu / Contract No / Vertrag No	Nr zlecenia/Poz / Manuf. Order No/Pos / Auftrag No/Pos	Dowód dostawy / Delivery Note / Lieferschein Nr	Nr środka transportu / Number of transport / Transportmittel-Nr
	OSC2370453	**PL/277839653/23-11064892**	**1106492/000002**	**64116263**	**KN5577J / KN779PC**
	ORDER: OSC2370453	**LOT: MOZZECANE (VERONA)**		PREBON: 1100679992/2	

B01 Norma przedmiotowa/According/Nach: **EN 10025-1:2004**
Norma klasyfikacyjna/Classification standards/Materialnorm: **EN 10025-2:2019**
Norma wymiarowa/Tolerance standards/Massnorm: **EN 10365:2017 and EN10034:1993**

B02-B03 B09-B11
Dwuteowniki ciężkie IPE 330 długość: 7400,00 mm gat.stali: S355J2+M
Heavy I-beams IPE 330 length: 7400,00 mm steel grade: S355J2+M

B07 Wytop/Heat/Charge	Paczki/Sztuki - Bundles/Pieces - Bundel/Stuck	B13 Tonaż/Weight/Gewicht
105716	**5 / 30**	**10,760 t**

Razem/Total/Gesamtbetrag **5 / 30** **10,760 t**

C71-C92 Skład chemiczny - Chemical composition - Chemische Zusammensetzung [%]

B07 Wytop/Heat/Charge	C	Mn	Si	P	S	Cu	Cr	Ni	Al	N_2	Mo	Nb	V	Ti	Sn	Pb	As	B	O	H_2	CEV
105716	0,17	1,47	0,206	0,016	0,007	0,02	0,05	0,027	0,029	0,0098	0,003	0,003	0,003	0,001	0,008	<0,001	<0,001	0,0004			0,43

Właściwości mechaniczne - Mechanical properties - Mechanische Eigenschaften

B07 Wytop/Heat/Charge	C11 Re [Mpa]	R02 [Mpa]	C12 Rm [Mpa]	A [mm]	A [%]	C13 Re/Rm	R02/Rm	D73 Szer.próbki Pr.width Probebreite KV [mm]	C41 Temp. ^{0}C	C44. Pr.1/Test 1/Arb.1	C42 - Praca łamania/Work of fracture/Schlagfestigkeit KV [J] Pr.2/Test 2/Arb.2	Pr.3/Test 3/Arb.3	Średnia avarage test Mittelwert
105716	402,0		548,0		30,1	0,73		10,0	-20	129,0	119,0	90,0	113,0
105716	458,0		606,0		29,4	0,76		10,0	-20	85,0	67,0	96,0	83,0

Badany materiał nie wykazał radioaktywności powyżej 100Bq/kg.
The tested material showed no radioactivity above 100Bq/kg.
Das getestete Material zeigte keine Radioaktivität über 100 Bq/kg.

Proces wytwarzania stali Steelmaking process Stahlherstellungsverfahren
Stal wytwarzana w procesie konwertorowym tlenowym Steel produced in BOF process Stahl hergestellt im Sauerstoffaufblasverfahren

Deklaracja Właściwości Użytkowych Nr/Declaration of Performance No./ Leistungserklärung Nr.: AMDG-2/09-CPR-13-1 Kod typu wyrobu/Code of the product type/ Kenncode des Produkttyps: S355J2 https://sections.arcelormittal.com/documentation/declaration_of_performance/EN

Z01 Stwierdzenie o zgodności: Producent deklaruje, że dostarczone wyroby są zgodne z warunkami zamówienia.
Statement of compliance: The producer guarantees that delivered goods are in accordance with the conditions of the order.
Konformitatserklarung: Der Hersteller dekliert dass die gelieferten Erzeugnisse den Bedingungen aus der Bestellung entsprechen.

A05, Z02.2
Zarządzanie Jakością – Wyroby Długie
Quality Management – Longs
Tomasz Szafrański

Z.05 UKCA 0038 22

Z.04 CE 1436 06

Wystawił: BKGD01 ORYGINAŁ/ORIGINAL 02.09.2023 10:02:27 Strona 1 / 1

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: 219914

AENOR ACERO ESTRUCTURAL 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19769680102627	**IPE 330**	**9,1 m.**	**10**	**219914**	**4.371**

1 paquetes **10 barras** **4.371 Kg**

TRANSPORTISTA
AMGEL VAZQUEZ FERNANDEZ N.I.F. 35777488E

OPERADOR DE TRANSPORTE
AMBROGIO TRASPORTI, S.P.A. VIA F.LLI KENNEDY 1 10048 VINOVO ITALIA V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1765516

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb					Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78									
IPE-330	219914	,06	,95	,19	,017	,021	,012	,004	,130	,360	,180	,024	,026					,28

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180°	°C	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	219914	386	479	32,5		-20°	7,5	150	161	156	156

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
AMGEL VAZQUEZ FERNANDEZ N.I.F. 35777488E

OPERADOR DE TRANSPORTE
AMBROGIO TRASPORTI, S.P.A. VIA F.LLI KENNEDY 1 10048 VINOVO ITALIA V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
manuela.bruni@mannigroup.com
COVER MATERIAL

Ref: 1100668894

TRANSPORTISTA

AMGEL VAZQUEZ FERNANDEZ

N.I.F. 35777488E

OPERADOR DE TRANSPORTE

AMBROGIO TRASPORTI, S.P.A.
VIA F.LLI KENNEDY 1
10048 VINOVO
ITALIA
V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

2665/ 3402

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110036
CODICE FISCALE 01910110036
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110036
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9172 2023 **del** 18/10/23

Pag. 1

Your Ref.: OSC2361407 16-1817 / 9/10/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

000659

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: 141187

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9172

B01 Prodotto e Dimensioni / *Product and Dimension* B11
B02 Qualità acciaio / *Steel Grade*
B08 N. Fasci / *Number of Bundles*
B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*
Norma qualità / *Standard quality*
B08 N. Barre / *Number of Pieces*
B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*
A07 Ordine cliente N. / *Customer's order N.*
A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

	(*)				C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
					C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
					C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEB 180		S355J2 +AR		1	12,10	0,14	1,47	0,22	0,013	0,0120	0,027	0,358	0,010	0,459
EN 10365		EN 10025-2/EN10034:1		9	5.577	0,099	0,153	0,024	0,031	0,004	0,034	0,002		
No. 141321A	P	OSC2361321 16-1728			43/004024	448	586	28	10,0	42,0	42,0	40,0	41,3	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P	OSC2361317 16-172			43/003998	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184B	P	OSC2361407 16-18			43/004230	430	589	31	7,5	57,0	56,0	69,0	60,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185B	P	OSC2361407 16-18			43/004230	386	559	27	7,5	56,0	75,0	72,0	67,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,12	1,32	0,21	0,017	0,0040	0,030	0,344	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,133	0,196	0,034	0,029	0,002	0,024	0,002		
No. 141186A	P	OSC2361407 16-18			43/004230	409	570	29	7,5	43,0	44,0	44,0	43,7	- 20
IPE 240		S355J2 +AR		2	12,10	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365		EN 10025-2/EN10034:1		24	8.915	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187	P	OSC2361317 16-172			43/003998	422	564	27	7,5	43,0	72,0	60,0	58,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

2666/ 3402

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9172

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22



03 N° 2023 DDT / PA/9172

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9172

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000201392
PLACCA/COLATA: CE625809

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03969992
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202234741
Order number : 10818123
Your order : OSC2360939

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Tensile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE240 L.12.1M	CE625809	0,100	1,130	0,170	0,030	0,019	0,120	0,130	0,380	0,018	0,026	0,005	0,002	0,0086	0,001	0,351	396	529	29,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

Castellbisbal,24.07.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03969992
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202234741
Order number : 10818123
Your order : OSC2360939

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE240 L.12.1M	CE625809	75	44	49	56	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,24.07.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA
COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 24.07.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202234741

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: 48213364M

CRUZ SOLIS, ELDER AVELION
CALLE / JUAN RAMON JIMENEZ, 19
08191 RUBI
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10818123				Su pedido: OSC2360939			
	9402402682	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE625809	5.521 KG
	9402402678	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE625809	5.530 KG
	9402402680	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE625809	5.540 KG
	9402402679	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE625809	5.550 KG
10818134				Su pedido: OSC2360938			
	9402402425	BA05-100X12.1	25	S275J0 + AR HEA100 L.12.1M		CE625844	4.899 KG
TOTAL			85				27.040 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001373369 / 810671

TRANSPORTISTA / CARRIER: TRANS ITALIA SRL
PIAZZA MARTINEZ, 5
I-84085 MERCATO SAN SEVERINO (SA)

MATRÍCULA / VEHICLE REG. NUMBER: 7490FWR / XA146GS

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
24	07	2023	48213364M	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301791

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **07.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000448457-1723001808 129A90A-0000900291

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000448457

ordine cliente:
customer order: 1723001808 129A90A

documento di trasporto:
document of trasport DDT 0000900291

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

06/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80617628

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80617628
DDT	900291
OdV	448457
Riferimento Cliente	1723001808 129A90A
	Quantità in UMB (NO BDG)
	PZ
	110

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	190	275	#	IPE2403521992	142747B;	1
900002	200	276	#	IPE2403523991	142747B;	2
900003	210	277	#	IPE2403523191	142750A;	1
900004	220	278	#	IPE2403522791	142750A;	1
900005	230	284	#	IPE2403523983	142750A;	1
900006	240	290A	#	IPE2403523985	142747B;	20
900007	250	291	#	IPE2403523982	142750A;	1
900008	260	346	#	IPE2403523985	142750A;	4
900009	260	346	#	IPE2403523985	142750A;	2
900010	270	348	#	IPE2403523985	142750A;	4
900011	270	348	#	IPE2403523985	142747B;	2
900012	280	338	#	IPE2403523993	142747B;	2
900013	290	337	#	IPE2403523992	142747B;	2
900014	300	339	#	IPE2403521991	142750A;	1
900015	310	350	#	IPE2403523982	142750A;	4
900016	320	352	#	IPE2403523982	142750A;	8
900017	330	356	#	IPE2403523982	142750A;	8
900018	330	356	#	IPE2403523982	142750A;	1
900019	340	357	#	IPE2403523982	142750A;	4
900020	350	359	#	IPE2403523982	142750A;	1
900021	360	341	#	IPE2403523983	142750A;	3
900022	370	282	#	IPE2403522192	142747B;	1
900023	380	283	#	IPE2403522991	141185A;	1
900024	390	285	#	IPE2403522490	141185A;	1
900025	400	286	#	IPE2403522492	141185A;	1
900026	410	288	#	IPE2403522487	141185A;	1
900027	420	297	#	IPE2403522992	141185A;	1
900028	430	343	#	IPE2403523992	141185A;	2
900029	440	344	#	IPE2403523982	70717;	2
900030	440	344	#	IPE2403523982	141185A;	1
900031	450	345	#	IPE2403523982	70717;	1
900032	460	347	#	IPE2403523982	141185A;	1
900033	470	349	#	IPE2403523985	141185A;	1
900034	480	351	#	IPE2403523985	70716;	8
900034	480	351	#	IPE2403523985	70717;	4
900035	480	351	#	IPE2403523985	142747B;	1
900036	480	351	#	IPE2403523985	141185A;	1
900037	480	351	#	IPE2403523985	141185A;	1
900038	480	351	#	IPE2403523985	141185A;	1
900039	490	353	#	IPE2403523982	70717;	2
900040	490	353	#	IPE2403523982	70717;	1
900041	500	354	#	IPE2403523982	70717;	2
900042	510	358	#	IPE2403523985	141185A;	1
900043	520	360	#	IPE2403523985	141185A;	1

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110036
CODICE FISCALE 01910110036
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110036
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 63 2024 **del** 5/01/24

Pag. 1

Your Ref.: OSC2380540 - NS 16 2223 / 14/12/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000900291
PLACCA/COLATA: 142747B

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/63

B01 Prodotto e Dimensioni / *Product and Dimension*	(*)	B11 B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
					C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	**CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES***								
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
IPE 220		S275J0 +AR	1	18,10	0,08	0,64	0,20	0,015	0,0050	0,006	0,369	0,009	0,256
EN 10365		EN10025-2/EN10034:19	14	6.629	0,085	0,171	0,033	0,001	0,001	0,029	0,002		
No. 142797A	P	OSC2380467 - NS 16 1		43/004565	329	449	30	7,5	200,0	198,0	180,0	192,7	0
HEA 140		S355J2 +AR	1	18,10	0,13	1,29	0,20	0,013	0,0140	0,026	0,344	0,010	0,407
EN 10365		EN 10025-2/EN10034:1	16	7.142	0,073	0,115	0,022	0,026	0,001	0,024	0,003		
No. 142837A	P	OSC2380431 16-1844		43/004326	408	558	27	7,5	50,0	44,0	60,0	51,3	- 20
IPE 240		S355J2 +AR	1	18,10	0,13	1,25	0,21	0,020	0,0060	0,025	0,388	0,009	0,413
EN 10365		EN 10025-2/EN10034:1	12	6.658	0,108	0,134	0,023	0,029	0,001	0,029	0,002		
No. 142747B	P	OSC2380540 - NS 16 2		43/005299	404	560	29	7,5	74,0	98,0	88,0	86,7	- 20
UPN 220		S355J2 +AR	1	18,10	0,15	1,26	0,19	0,013	0,0080	0,023	0,339	0,010	0,425
EN 10365		EN 10025-2/EN10279:2	16	8.501	0,092	0,129	0,025	0,028	0,001	0,030	0,002		
No. 142744A	P	OSC2380496 - NS 16 2		43/004948	424	558	29	7,5	109,0	118,0	107,0	111,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2024 DDT / PA/63

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
Firmato a nome e per conto del fabbricante */Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

02 N° 2024 DDT / PA/63

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2024 DDT / PA/63

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2024 DDT / PA/63

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2024 DDT / PA/63

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2024 DDT / PA/63

2680/ 3402

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 0324511 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 156 2024 **del** 9/01/24

Pag. 1

Your Ref.: OSC2380540 - NS 16 2223 / 14/12/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

000659

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000900291
PLACCA/COLATA: 142750A

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/156

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*		B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
Norma del prodotto / *Standard product*			Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
B07 Colata - Lotto / *Heat - Item*			A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEB 140			S275J0 +AR	2	18,10	0,09	0,62	0,19	0,012	0,0080	0,009	0,364	0,009	0,252
EN 10365			EN10025-2/EN10034:19	24	14.630	0,074	0,167	0,034	0,001	0,001	0,028	0,002		
No. 142799A		P	OSC2380495 16-20		43/004947	303	439	33	10,0	204,0	216,0	193,0	204,3	0
IPE 300			S275J0 +AR	1	18,10	0,08	0,74	0,20	0,009	0,0080	0,006	0,311	0,010	0,267
EN 10365			EN10025-2/EN10034:19	10	7.634	0,087	0,165	0,033	0,001	0,003	0,019	0,002		
No. 142664A		P	OSC2380430 16-1		43/004317	320	445	29	10,0	229,0	208,0	228,0	221,7	0
IPE 240			S355J2 +AR	1	18,10	0,14	1,27	0,20	0,020	0,0120	0,025	0,388	0,009	0,425
EN 10365			EN 10025-2/EN10034:1	12	6.666	0,124	0,119	0,023	0,027	0,001	0,029	0,002		
No. 142750A		P	OSC2380540 - NS 16 2		43/005299	409	568	28	7,5	72,0	73,0	41,0	62,0	- 20

(*)

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

2681/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2024 DDT / PA/156

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

02 N° 2024 DDT / PA/156

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances: Carico di snervamento / *Yeld strength* Carico di rottura / *tensile strength* Allungamento / *elongation* Resilienza / *impact strength* Saldabilità / *weldability CEV*	:	Espressamente indicati nella DoP *Espressed as indicated in the DoP*
Durabilità / *durability:*		NPD

02 N° 2024 DDT / PA/156

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2024 DDT / PA/156

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*		Prestazione / *performance*		Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi /*sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2024 DDT / PA/156

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2024 DDT / PA/156

2685/ 3402

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 0324511 – FAX. 0324527O5
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO – VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9125 2023 **del** 17/10/23

Pag. 1

Your Ref.: OSC2370485 - 16 1634 / 11/09/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000900291
PLACCA/COLATA: 141185A

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9125

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
IPE 300	S275J0 +AR	1	18,10	0,10	0,74	0,20	0,010	0,0070	0,007	0,341	0,010	0,286
EN 10365	EN10025-2/EN10034:19	10	7.552	0,116	0,138	0,028	0,002	0,003	0,013	0,002		
No. 140630B	P OSC2370485 - 16 1634		43/003777	323	456	27	10,0	245,0	220,0	260,0	241,7	0
IPE 240	S355J2 +AR	2	18,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365	EN 10025-2/EN10034:1	24	13.186	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P OSC2370483 - 16 1630		43/003775	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240	S355J2 +AR	1	18,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365	EN 10025-2/EN10034:1	12	6.592	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185A	P OSC2370483 - 16 1630		43/003775	434	570	27	7,5	60,0	37,0	64,0	53,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

2686/ 3402

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2023 DDT / PA/9125

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

02 N° 2023 DDT / PA/9125

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2023 DDT / PA/9125

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9125

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/9125

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9125

CSN
Companhia Siderúrgica Nacional

SWT

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000900291
PLACCA/COLATA: 70717

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2691/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2692/ 3402

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448457
RIF. ORDINE: 1723001808 129A90A
DDT: 0000900291
PLACCA/COLATA: 70716

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30	C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2694/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 63/7-2023**
Advice No. 800150968

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
28	70716	IPE 240	EN 10365	18.100 mm	8	4.400 kg
28	70717	IPE 240	EN 10365	18.100 mm	64	35.390 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70716	0,10	0,18	1,44	0,016	0,016	0,009	0,016	0,039	0,007	0,09
70717	0,10	0,18	1,42	0,016	0,016	0,010	0,016	0,040	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70716	0,29	0,14	0,03	0,022	0,39
70717	0,27	0,13	0,04	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70716	402	559	25,0	
70717	392	546	26,0	

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

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23

032 CPD 2023-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 63/7-2023**
Advice No. 800150968

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
70716	KV 450/7.5	L	-20 °C	14 / 20	109	105	109	107
70717	KV 450/7.5	L	-20 °C	14 / 20	157	59	121	112

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
23

032 OPB 2020-10-01 SWT

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301790

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

07.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452309-1723001808 .129A90A-0000103174

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452309

ordine cliente:
customer order: 1723001808 .129A90A

documento di trasporto:
document of trasport DDT 0000103174

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

07/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

#VALORE!	#VALORE!										Qtà
			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
Cliente	1500011109		10	MSTR	379	#	HEA5003525985	141507B;	103174	06.02.2024	1
	ROSETTI MARINO S.P.A.		20	MSTR	381	#	HEA5003522601	140754A;	103174	06.02.2024	1
OdV	452309							141507B;	103174	06.02.2024	1
Riferiment	1723001808 .129A90A		30	MSTR	378	#	HEA5003524484	140754A;	103174	06.02.2024	3
			40	MSTR	382	#	HEA5003527800	140754A;	103174	06.02.2024	1

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1872 2023 **del** 14/12/23

Pag. 1

Your Ref.: OSC2380470 / 30/10/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103174
PLACCA/COLATA: 140754A

000992

A09 DdT / *SHIPPING DOCUMENT:* DDT/DELIVNOTE GU/1872

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*	**CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES***								
					C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEB 280		S275J0 +AR	3	20,10	0,14	0,54	0,19	0,014	0,0080	0,005	0,446	0,009	0,309
EN 10365		EN10025-2/EN10034	6	12.423	0,128	0,155	0,035	0,001		0,025			
No. 142381A	G	OSC2380470		43/001960	322	478	33	10,0	63,0	85,0	78,0	75,3	0
HEA 500		S355J2 +AR	2	20,10	0,15	1,29	0,21	0,015	0,0070	0,021	0,483	0,009	0,448
EN 10365		EN 10025-2/EN10034	4	12.461	0,145	0,173	0,034	0,003	0,003	0,025	0,021	0,0004	
No. 140754A	G	OSC2380458		43/001946	356	514	32	10,0	133,0	140,0	130,0	134,3	- 20
HEB 500		S355J2 +AR	1	20,10	0,15	1,24	0,19	0,015	0,0100	0,021	0,458	0,009	0,438
EN 10365		EN 10025-2/EN10034	1	3.759	0,126	0,214	0,044	0,003	0,002	0,026	0,020	0,0004	
No. 140916A	G	OSC2380458		43/001946	368	516	31	10,0	144,0	149,0	141,0	144,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2701/3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GU/1872

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 qualità: JR, J0, J2.
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	S275JR/J0/J2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21

02 N° 2023 DDT / GU/1872

2702/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GU/1872**

2703/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GU/1872

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2

Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*
Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21



03 N° 2023 DDT / GU/1872

2704/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GU/1872**

2705/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1589 2023 **del** 30/10/23

Pag. 1

Your Ref.: OSC2370506 / 19/09/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103174
PLACCA/COLATA: 141507B

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/1589

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)														
HEA 240		S275J0 +AR	2	18,10	0,15	0,55	0,22	0,010	0,0050	0,007	0,336	0,009	0,300
EN 10365		EN10025-2/EN10034	12	13.098	0,072	0,137	0,030	0,001		0,025			
No. 141776A	G	OSC2370506		43/001681	322	473	35	10,0	147,0	144,0	145,0	145,3	0
HEB 300		S275J0 +AR	1	18,10	0,15	0,55	0,20	0,010	0,0060	0,007	0,384	0,009	0,308
EN 10365		EN10025-2/EN10034	2	4.236	0,110	0,148	0,030	0,001		0,023			
No. 141713A	G	OSC2370506		43/001681	312	475	35	10,0	111,0	107,0	107,0	108,3	0
HEA 500		S355J2 +AR	1	20,10	0,14	1,24	0,21	0,015	0,0070	0,024	0,418	0,010	0,424
EN 10365		EN 10025-2/EN10034	2	6.231	0,114	0,170	0,040	0,002	0,002	0,025	0,018	0,0001	
No. 141507B	G	OSC2370427		43/001459	357	523	32	10,0	118,0	116,0	131,0	121,7	- 20
IPE 360		S355J2 +AR	1	20,10	0,15	1,32	0,18	0,012	0,0090	0,024	0,401	0,011	0,439
EN 10365		EN 10025-2/EN10034	4	4.591	0,094	0,137	0,028	0,002	0,003	0,027	0,024	0,0001	
No. 141752A	G	OSC2370488		43/001604	385	538	32	10,0	157,0	142,0	137,0	145,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2706/3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GU/1589

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 qualità: JR, J0, J2.
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	S275JR/J0/J2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21

02 N° 2023 DDT / GU/1589

2707/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GU/1589**

2708/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GU/1589

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21

03 N° 2023 DDT / GU/1589

2709/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GU/1589**

2710/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1446 2023 **del** 6/10/23

Pag. 1

Your Ref.: OSC2370427 / 2/08/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103174
PLACCA/COLATA: 141507B

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/1446

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)														
HEA 500		S355J2 +AR	1	20,10	0,14	1,24	0,21	0,015	0,0070	0,024	0,418	0,010	0,424
EN 10365		EN 10025-2/EN10034	2	6.211	0,114	0,170	0,040	0,002	0,002	0,025	0,018	0,0001	
No. 141507B	G	OSC2370427		43/001459	357	523	32	10,0	118,0	116,0	131,0	121,7	- 20
IPE 330		S355J2 +AR	3	20,10	0,15	1,31	0,18	0,020	0,0060	0,023	0,413	0,011	0,445
EN 10365		EN 10025-2/EN10034	18	17.709	0,144	0,141	0,024	0,003	0,002	0,024	0,018	0,0004	
No. 141202A	G	OSC2370427		43/001459	382	537	32	7,5	134,0	123,0	128,0	128,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2711/3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GU/1446

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

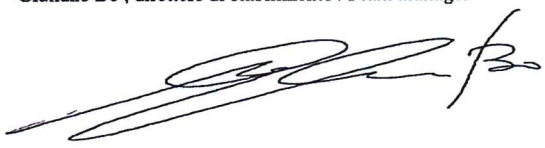
7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*
Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



03 N° 2023 DDT / GU/1446

2712/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GU/1446**

2713/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301793

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

09.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452309-1723001808 .129A90A-0000103404

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452309

ordine cliente:
customer order: 1723001808 .129A90A

documento di trasporto:
document of trasport DDT 0000103404

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

08/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
	Quantità		50	MSTR	383	#	HEA3403522848	70494;	103404	07.02.2024	1
	CHRISTIAN CELADON		70	MSTR	366	#	IPE3303523991	225536;	103404	07.02.2024	4
			80	MSTR	373	#	IPE3303523992	225536;	103404	07.02.2024	4
								75310;	103404	07.02.2024	3
			90	MSTR	385	#	IPE3303523986	225536;	103404	07.02.2024	1
			100	MSTR	386	#	IPE3303523592	225536;	103404	07.02.2024	1
								75310;	103404	07.02.2024	1
			110	MSTR	387	#	IPE3303522692	225536;	103404	07.02.2024	4
			120	MSTR	388	#	IPE3303523492	225536;	103404	07.02.2024	1
								75311;	103404	07.02.2024	3
			130	MSTR	401	#	IPE3303521989	75310;	103404	07.02.2024	1

MANNI SIPRE
STEEL ENGINEERING

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103404
PLACCA/COLATA: 70494

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2719/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2357/6-2023**
Advice No. 800150471

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
10	70494	HE 340A	EN 10365	24.100 mm	6	15.150 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
70494	0,10	0,18	1,44	0,021	0,021	0,008	0,016	0,039	0,008	0,13

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
70494	0,27	0,12	0,03	0,021	0,40

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
70494	429	543	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
70494	KV 450	L	-20 °C	19 / 27	75	51	64	63

Z03 Works inspector
René Merbach

Z02 26.06.2023

Z04

CE
0769
23

032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 2357/6-2023
Advice No. 800150471

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 26.06.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103404
PLACCA/COLATA: 225536

AENOR
AENOR ACERO ESTRUCTURAL
0086 CPR 753114
09-0099
AMOL-2/09-CPR-13-1
EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871339838	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340029	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340232	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.455**
19768871340247	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340525	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871339364	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.454**
19768871339511	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.455**
7 paquetes			**28 barras**		**24.180 Kg**

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
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20212 OLABERRIA (Gipuzkoa)
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A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
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A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1818651

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	E08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225533	,08	1,01	,20	,023	,024	,010	,003	,140	,450	,220	,034	,028						,33
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	E08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225533	403	504	34,1		-20º	7,5	107	121	36	88
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

2 / 2 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
MARTIN RODRIGUEZ O NORBERTO ALMANDOZ 5-1º B 20100 ERRENTERIA GIPUZKOA N.I.F. 34095204G

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

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ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

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OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCKS PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
spedizioni.crema@mannigroup.com
marianna.rigamonti@mannigroup.com
COVER MATERIAL

Ref: 1100685201

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103404
PLACCA/COLATA: 75310

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30	C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2728/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2729/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A.

.....
Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2730/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 524/1-2024
Advice No. 800164872

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
15	75310	IPE 330	EN 10365	18.100 mm	30	26.405 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
75310	0,09	0,19	1,43	0,021	0,022	0,008	0,014	0,040	0,006	0,10

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
75310	0,30	0,17	0,04	0,023	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
75310	409	579	25,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
75310	KV 450	L	-20 °C	19 / 27	55	54	54	54

Z03 Works inspector
René Merbach

Z02 08.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 524/1-2024**
Advice No. 800164872

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 08.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2733/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2734/ 3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103404
PLACCA/COLATA: 225536

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099
AMOL-2/09-CPR-13-1
EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	17/11/23	OSC2370636	17/11/23	30/11/23

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871138120	IPE 330	11,4 m.	8	225536	4.322
19768871138427	IPE 330	11,4 m.	8	225536	4.322
19768871139540	IPE 330	13,1 m.	8	225536	4.966
19768871139853	IPE 330	12,7 m.	8	225536	4.815
19768871139988	IPE 330	12,7 m.	8	225536	4.815

5 paquetes **40 barras** **23.240 Kg**

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	37.640	23.240

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UK CA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	17/11/23	OSC2370636	17/11/23	30/11/23

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1815377

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	E08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	E08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
FERTRANS SPAGNA , SL AV. DELS PORTS D EUROPA, S/ N 100 DES .1 BARCELONA BARCELONA N.I.F. B65925687

OPERADOR DE TRANSPORTE
FERTRANS SRL STRADA SALSEDIANA OVEST 1197 29010 ALSENO ITALIA V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	37.640	23.240

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819 **0001-IN24-2020-000211** **20191023/021803** **YOUNES EL ASSAS** **D.N.I. 11452194B**	Alvaro Lopez 16:30 18:06

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UK CA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 1 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
fabio.scapinello@mannigroup.com
COVER MATERIAL

Ref: 1100686910

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

2738/ 3402

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

2739/ 3402

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000103404
PLACCA/COLATA: 75311

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2741/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0836

   British Board of Agrément
   Bucknalls Lane
   Watford
   Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2742/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

<table>
<tr><td>Essential characteristic</td><td colspan="5">Performance</td><td>Harmonised technical specification</td></tr>
<tr><td rowspan="2">Tolerances on dimensions</td><td colspan="2">HE / IPE / UB / UC
HP / HD / UBP</td><td colspan="3">according to EN 10034:1993</td><td rowspan="15">EN 10025-1:2004</td></tr>
<tr><td colspan="2">UPN / UPE / PFC</td><td colspan="3">according to EN 10279:2000</td></tr>
<tr><td rowspan="4">Yield strength</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>></td><td>≤</td><td>min (MPa)</td><td colspan="2"></td></tr>
<tr><td></td><td>16</td><td>355</td><td colspan="2"></td></tr>
<tr><td>16</td><td>40</td><td>345</td><td colspan="2"></td></tr>
<tr><td rowspan="3">Tensile strength</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>≥</td><td>≤</td><td>min (MPa)</td><td colspan="2">max (MPa)</td></tr>
<tr><td>3</td><td>100</td><td>470</td><td colspan="2">630</td></tr>
<tr><td rowspan="3">Elongation $L_0 = 5{,}65\sqrt{S_0}$</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>≥</td><td>≤</td><td>min (%)</td><td colspan="2"></td></tr>
<tr><td>3</td><td>40</td><td>22</td><td colspan="2"></td></tr>
<tr><td rowspan="3">Impact strength</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>></td><td>≤</td><td>min (J)</td><td colspan="2"></td></tr>
<tr><td></td><td>100</td><td>27 at -20°C</td><td colspan="2"></td></tr>
<tr><td rowspan="4">Weldability CEV</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>></td><td>≤</td><td rowspan="3"></td><td colspan="2">max (%)</td></tr>
<tr><td></td><td>30</td><td colspan="2">0,45</td></tr>
<tr><td>30</td><td>40</td><td colspan="2">0,47</td></tr>
<tr><td rowspan="4">Durability</td><td colspan="2">Nominal thickness (mm)</td><td colspan="3">Values</td></tr>
<tr><td>></td><td>≤</td><td rowspan="2"></td><td colspan="2">max (%)</td></tr>
<tr><td></td><td>30</td><td>C*: 0,20
Mn: 1,60
P: 0,030
S: 0,030
Si: 0,55</td><td>Cu: 0,55
Ni: 0,42
Cr: 0,29
Mo: 0,11</td></tr>
<tr><td colspan="5">* For nominal thickness > 30 mm max. 0,22 % C</td></tr>
</table>

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2743/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030329
A07 Your Order No.: OSC2370657

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 527/1-2024**
Advice No. 800164875

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
25	75310	IPE 330	EN 10365	18.100 mm	6	5.290 kg
25	75311	IPE 330	EN 10365	18.100 mm	6	5.285 kg
26	75310	IPE 330	EN 10365	20.100 mm	9	8.800 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
75310	0,09	0,19	1,43	0,021	0,022	0,008	0,014	0,040	0,006	0,10
75311	0,10	0,20	1,45	0,023	0,023	0,009	0,016	0,041	0,007	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
75310	0,30	0,17	0,04	0,023	0,39
75311	0,28	0,18	0,04	0,021	0,40

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
75310	409	579	25,0	
75311	401	576	27,0	

Z03 Works inspector
René Merbach

Z02 08.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030329
A07 Your Order No.: OSC2370657

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 527/1-2024**
Advice No. 800164875

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
75310	KV 450	L	-20 °C	19 / 27	55	54	54	54
75311	KV 450	L	-20 °C	19 / 27	52	44	44	46

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 08.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2021-03-02 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2747/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301794

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **09.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.

STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3344 2023 **del** 9/06/23

Pag. 1

Your Ref.: OSC2360647 / 27/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457451
RIF. ORDINE: 1723001808 129A90A L
DDT: 0000201514
PLACCA/COLATA: 139893B

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3344

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)													
HEA 260		S275J0 +AR	2	12,10	0,14	0,52	0,19	0,014	0,0050	0,006	0,436	0,010	0,308
EN 10365		EN10025-2/EN10034	16	13.272	0,137	0,173	0,035	0,002		0,018			
No. 138663C	G	OSC2360647		43/000855	339	483	34	10,0	146,0	157,0	143,0	148,7	0
HEA 340		S355J2 +AR	2	12,10	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	8	10.218	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893B	G	OSC2360630		43/000828	366	531	33	10,0	197,0	188,0	193,0	192,7	- 20
HEB 340		S355J2 +AR	1	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	4	5.550	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2749/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali / *Essential characteristics*	Prestazione / *Performance*				Norma armonizzata / *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	S275JR/J0/J2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*
Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

02 N° 2023 DDT / GA/3344

2750/ 3402

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/3344**

2751/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



03 N° 2023 DDT / GA/3344

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3344**

2753/ 3402

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/5593351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457451
RIF. ORDINE: 1723001808 129A90A L
DDT: 0000201514
PLACCA/COLATA: CE247702

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04015608
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202262759
Order number : 10827668
Your order : OSC2361277

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE330 L.13.1M	CE247698	0,100	1,320	0,190	0,025	0,025	0,130	0,120	0,380	0,019	0,072	0,009	0,002	0,0121	0,001	0,398	386	528	29,0
S 355 J2 +M IPE330 L.13.1M	CE247702	0,100	1,360	0,210	0,023	0,030	0,150	0,130	0,400	0,020	0,072	0,007	0,002	0,0107	0,001	0,414	394	556	30,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

Castellbisbal,19.10.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04015608
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202262759
Order number : 10827668
Your order : OSC2361277

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE330 L.13.1M	CE247698	85	55	61	67	-20
S 355 J2 +M IPE330 L.13.1M	CE247702	70	38	45	51	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,19.10.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA
COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 19.10.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202262759

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: B10739969

NADIVAN TRANS, S.L.
AVDA\ REINA MARIA CRISTINA, 42 3
TARRAGONA
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10823616				Su pedido: OSC2361170			
	9402419095	BE05-300X9.1	12	S 275 J0 + AR IPE300 L.9,1 M		CE247502	4.464 KG
	9402419091	BE05-300X9.1	12	S 275 J0 + AR IPE300 L.9,1 M		CE247505	4.464 KG
	9402419088	BE05-300X9.1	12	S 275 J0 + AR IPE300 L.9,1 M		CE247505	4.474 KG
10827668				Su pedido: OSC2361277			
	9402427685	BETM-330X13.1	2	S355J2 + M IPE330 L.13.1M		CE247698	1.250 KG
	9402427683	BETM-330X13.1	8	S355J2 + M IPE330 L.13.1M		CE247702	5.028 KG
TOTAL			46				19.680 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001394073 / 831570

TRANSPORTISTA / CARRIER: LIBERTIA SOLUCIONES LOGISTICAS SLU
AV.TORRECILLA 21-1º11ª
14013 CORDOBA
ESPAÑA

MATRÍCULA / VEHICLE REG. NUMBER: 5408HPB / R0250BCK

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
19	10	2023	X8591002L	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

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CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457451
RIF. ORDINE: 1723001808 129A90A L
DDT: 0000201514
PLACCA/COLATA: CE249087

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04066357
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202292314
Order number : 10840686
Your order : OSC2361782

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE240 L.12.1M	CE249087	0,100	1,150	0,180	0,024	0,029	0,140	0,130	0,380	0,018	0,029	0,005	0,001	0,0122	0,001	0,360	397	532	28,0
S 355 J2 +M IPE240 L.12.1M	CE623350	0,140	1,140	0,160	0,018	0,021	0,140	0,120	0,410	0,018	0,029	0,007	0,002	0,0113	0,001	0,401	386	522	28,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,23.01.2024
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04066357
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202292314
Order number : 10840686
Your order : OSC2361782

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE240 L.12.1M	CE249087	83	52	57	64	-20
S 355 J2 +M IPE240 L.12.1M	CE623350	140	110	116	122	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,23.01.2024
Juan Diego Martínez Gálvez
Quality Control Manager

Cia. Española de Laminación, S.L.
Carrer de la Ferralla, 12Pol. Ind. San Vicente
Castellbisbal-Barcelona,Spain

Anexo al Certificado / Certificate annex

Documento de referencia / Reference document:
Pedido / PO Number: **10840686**
Entrega / Delivery: **202292314**
Referencia / Reference:

Por el presente certificamos que el material entregado cumple con los términos del pedido y es conforme con el Reglamento (UE) Nº 833/2014 de 31 de julio de 2014 relativo a medidas restrictivas motivadas por acciones de Rusia que desestabilizan la situación en Ucrania y con todas sus posteriores actualizaciones.

We hereby certify that the delivered material complies with the terms of the order and are in conformity with the EU Regulation nº 833/2014 and all further amendments accordingly of 31 July 2014 concerning restrictive measures in view of Russia's actions desestabilising the situation in Ukraine.

Modo de producción - Steel making

Acería de horno eléctrico de arco - Electric arc meltshop:
Cia. Española de Laminación, S.L. - España

Laminación en caliente / Frío - Hot/Cold Rolling Mill:
Cia. Española de Laminación, S.L. - España

Códigos arancelarios de los productos relacionados en este documento /Related products HS Codes:
72163291,72163390

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA
COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 23.01.2024

NºALBARÁN: / DELIVERY NOTE NUMBER: PE4 202292314

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: B67472951

elina trans
BARCELONA
BARCELONA
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10832525				Su pedido: OSC2361458			
	9402449511	BATM-360X13.3	3	S 355 J2 + M HEA360 L.13.3 M		CE248709	4.356 KG
10840686				Su pedido: OSC2361782			
	9402459189	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.519 KG
	9402459188	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.479 KG
	9402459187	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.469 KG
	9402434998	BETM-240X12.1	8	S355J2 + M IPE240 L.12.1M		CE623350	2.917 KG
TOTAL			56				23.740 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001415192 / 850340

TRANSPORTISTA / CARRIER: LKW WALTER INTERNATIONAL
ZELLERSTRASSE 1
6330 A-6330 KUFSTEIN
AUSTRIA

MATRÍCULA / VEHICLE REG. NUMBER: 4061GBC / HROXS261

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
23	01	2024	X4287972J	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301795

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **09.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000455976-O.172300108 4 LOTTO-0000201513

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000455976

ordine cliente:
customer order: O.172300108 4 LOTTO

documento di trasporto:
document of trasport DDT 0000201513

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

08/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 62824

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2764/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2765/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022799
A07 Your Order No.: OSC2261112

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 859/10-2022**
Advice No. 800118532

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
3	62824	HE 340A	EN 10365	12.100 mm	4	5.090 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
62824	0,08	0,19	1,45	0,016	0,019	0,012	0,015	0,039	0,007	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
62824	0,26	0,15	0,04	0,023	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
62824	409	521	28,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
62824	KV 450	L	-20 °C	19 / 27	54	84	77	71

Z03 Works inspector
René Merbach

Z02 11.10.2022

Z04

CE

0769
22
032 CPR 2020-10-01 SWT
2766/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20022799
A07 Your Order No.: OSC2261112

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 859/10-2022
Advice No. 800118532

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 11.10.2022

Z04

CE

0769
22

032 CPR 2020-10-01 SWT
2767/ 3402

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 71643

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450082633
Data / Date 05.04.2023

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: 1100667086

Vagon/Wagon / Auto/Truck:
CS01ZAI/CS03ZAI

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH [N/mm^2]	Rm [N/mm^2]	A5 [%]	Incovoiere prin soc / Charpy impact test					
											Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	71677	S355J2+M	IPE240	6	2.201	12100	-0 / +100	419	557	28,0	300/7,5	-20	118,0	124,0	126,0	122,7
2	71643	S355J2+M	IPE240	10	3.718	12100	-0 / +100	415	551	27,0	300/7,5	-20	112,0	116,0	120,0	116,0
3	71642	S355J2+M	IPE240	30	11.151	12100	-0 / +100	421	561	27,0	300/7,5	-20	64,0	66,0	76,0	68,7

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	71677	0,130	1,190	0,250	0,005	0,021	0,110	0,130	0,320	0,030	0,001	0,040	0,027	0,016	0,0002	0,0014	0,0100			0,394
2	71643	0,130	1,160	0,240	0,005	0,016	0,150	0,140	0,310	0,040	0,001	0,042	0,030	0,016	0,0002	0,0014	0,0118			0,400
3	71642	0,120	1,170	0,240	0,012	0,019	0,160	0,160	0,340	0,040	0,001	0,048	0,033	0,017	0,0002	0,0014	0,0117			0,398

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte oţel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
FLORIN VIOREL DRAGOI

CE
12/1823

Form.PC-12 rev.5

A01 Nr rejestrowy BDO : 000012617
ArcelorMittal Poland S.A.
Oddział w Dąbrowie Górniczej
al. J. Piłsudskiego 92
41-308 Dąbrowa Górnicza

A02
ŚWIADECTWO ODBIORU 3.1
INSPECTION CERTIFICATE 3.1
ABNAHMEPRÜFZEUGNIS 3.1
EN 10204 Nr: **1003407813**

Z01.1
Dąbrowa Górnicza

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 105716

ArcelorMittal

A06.1
Zamawiający: **ARCELORMITTAL COMMERCIAL ITALY SRL**
Purchaser: **20139 MILANO** **Włochy / Italy / Italien**
Besteller: **VIALE BRENTA 27/29 VIALE BRENTA 27/29**

A06.2
Adres wysyłkowy: **MANNISIPRE s.p.a. 401041**
Address: **37060 MOZZECANE Włochy / Italy / Italien**
Versandadresse: **Via I Maggio**

A07	Nr zamówienia klienta / No of purchase order / No der Bestellung	Nr kontraktu / Contract No / Vertrag No	Nr zlecenia/Poz / Manuf. Order No/Pos / Auftrag No/Pos	Dowód dostawy / Delivery Note / Lieferschein Nr	Nr środka transportu / Number of transport / Transportmittel-Nr
	OSC2370453	**PL/277839653/23-11064892**	**11064892/000002**	**64116263**	**KN5577J / KN779PC**
	ORDER: OSC2370453	**LOT: MOZZECANE (VERONA)**		PREBON: 1100679992/2	

B01 Norma przedmiotowa/According/Nach	Norma klasyfikacyjna/Classification standards/Materialnorm	Norma wymiarowa/Tolerance standards/Massnorm
EN 10025-1:2004	**EN 10025-2:2019**	**EN 10365:2017 and EN10034:1993**

B02-B03 B09-B11
Dwuteowniki ciężkie IPE 330 długość: 7400,00 mm gat.stali: S355J2+M
Heavy I-beams IPE 330 length: 7400,00 mm steel grade: S355J2+M

B07 Wytop/Heat/Charge	Paczki/Sztuki - Bundles/Pieces - Bundel/Stuck	B13 Tonaż/Weight/Gewicht
105716	**5 / 30**	**10,760 t**
Razem/Total/Gesamtbetrag	**5 / 30**	**10,760 t**

C71-C92 Skład chemiczny - Chemical composition - Chemische Zusammensetzung [%]

B07 Wytop/Heat/Charge	C	Mn	Si	P	S	Cu	Cr	Ni	Al	N_2	Mo	Nb	V	Ti	Sn	Pb	As	B	O	H_2	CEV
105716	0,17	1,47	0,206	0,016	0,007	0,02	0,05	0,027	0,029	0,0098	0,003	0,003	0,003	0,001	0,008	<0,001	<0,001	0,0004			0,43

Właściwości mechaniczne - Mechanical properties - Mechanische Eigenschaften

B07	C11	C12	C13		D73	C41	C44.	C42 - Praca łamania/Work of fracture/Schlagfestigkeit KV [J]			
Wytop/Heat/Charge	Re [Mpa]	R02 [Mpa]	Rm [Mpa]	A [mm]	A [%]	Re/Rm	R02/Rm	Szer.próbki Pr.width Probebreite KV [mm]	Temp. ^{0}C	Pr.1/Test 1/Arb.1	Pr.2/Test 2/Arb.2	Pr.3/Test 3/Arb.3	Średnia avarage test Mittelwert
105716	402,0		548,0		30,1	0,73		10,0	-20	129,0	119,0	90,0	113,0
105716	458,0		606,0		29,4	0,76		10,0	-20	85,0	67,0	96,0	83,0

Badany materiał nie wykazał radioaktywności powyżej 100Bq/kg.
The tested material showed no radioactivity above 100Bq/kg.
Das getestete Material zeigte keine Radioaktivität über 100 Bq/kg.

Proces wytwarzania stali Steelmaking process Stahlherstellungsverfahren
Stal wytwarzana w procesie konwertorowym tlenowym Steel produced in BOF process Stahl hergestellt im Sauerstoffaufblasverfahren

Deklaracja Właściwości Użytkowych Nr/Declaration of Performance No./ Leistungserklärung Nr.: AMDG-2/09-CPR-13-1 Kod typu wyrobu/Code of the product type/ Kenncode des Produkttyps: S355J2 https://sections.arcelormittal.com/documentation/declaration_of_performance/EN

Z01 Stwierdzenie o zgodności: Producent deklaruje, że dostarczone wyroby są zgodne z warunkami zamówienia.
Statement of compliance: The producer guarantees that delivered goods are in accordance with the conditions of the order.
Konformitatserklarung: Der Hersteller dekliert dass die gelieferten Erzeugnisse den Bedingungen aus der Bestellung entsprechen.

A05, Z02.2
Zarządzanie Jakością – Wyroby Długie
Quality Management – Longs
Tomasz Szafrański

Z.05 UKCA 0038 22

Z.04 CE 1436 06

Wystawił: BKGD01 ORYGINAŁ/ORIGINAL 02.09.2023 10:02:27

A01 Nr rejestrowy BDO : 000012617
ArcelorMittal Poland S.A.
Oddział w Dąbrowie Górniczej
al. J. Piłsudskiego 92
41-308 Dąbrowa Górnicza

A02
ŚWIADECTWO ODBIORU 3.1
INSPECTION CERTIFICATE 3.1
ABNAHMEPRÜFZEUGNIS 3.1
EN 10204 Nr: **1003407813**

Z01.1
Dąbrowa Górnicza

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 105716

ArcelorMittal

A06.1
Zamawiający: **ARCELORMITTAL COMMERCIAL ITALY SRL**
Purchaser: **20139 MILANO** **Włochy / Italy / Italien**
Besteller: **VIALE BRENTA 27/29 VIALE BRENTA 27/29**

A06.2
Adres wysyłkowy: **MANNISIPRE s.p.a. 401041**
Address: **37060 MOZZECANE Włochy / Italy / Italien**
Versandadresse: **Via I Maggio**

A07	Nr zamówienia klienta / No of purchase order / No der Bestellung	Nr kontraktu / Contract No / Vertrag No	Nr zlecenia/Poz / Manuf. Order No/Pos / Auftrag No/Pos	Dowód dostawy / Delivery Note / Lieferschein Nr	Nr środka transportu / Number of transport / Transportmittel-Nr
	OSC2370453	**PL/277839653/23-11064892**	**11064892/000002**	**64116263**	**KN5577J / KN779PC**
	ORDER: OSC2370453	**LOT: MOZZECANE (VERONA)**		PREBON: 1100679992/2	

B01 Norma przedmiotowa/According/Nach: **EN 10025-1:2004**
Norma klasyfikacyjna/Classification standards/Materialnorm: **EN 10025-2:2019**
Norma wymiarowa/Tolerance standards/Massnorm: **EN 10365:2017 and EN10034:1993**

B02-B03 B09-B11
Dwuteowniki ciężkie IPE 330 długość: 7400,00 mm gat.stali: S355J2+M
Heavy I-beams IPE 330 length: 7400,00 mm steel grade: S355J2+M

B07 Wytop/Heat/Charge	Paczki/Sztuki - Bundles/Pieces - Bundel/Stuck	B13 Tonaż/Weight/Gewicht
105716	**5 / 30**	**10,760 t**
Razem/Total/Gesamtbetrag	**5 / 30**	**10,760 t**

C71-C92 Skład chemiczny - Chemical composition - Chemische Zusammensetzung [%]

B07 Wytop/Heat/Charge	C	Mn	Si	P	S	Cu	Cr	Ni	Al	N_2	Mo	Nb	V	Ti	Sn	Pb	As	B	O	H_2	CEV
105716	**0,17**	**1,47**	**0,206**	**0,016**	**0,007**	**0,02**	**0,05**	**0,027**	**0,029**	**0,0098**	**0,003**	**0,003**	**0,003**	**0,001**	**0,008**	**<0,001**	**<0,001**	**0,0004**			**0,43**

Właściwości mechaniczne - Mechanical properties - Mechanische Eigenschaften

B07	C11	C12	C13		D73	C41	C44.	C42 - Praca łamania/Work of fracture/Schlagfestigkeit KV [J]			
Wytop/Heat/Charge	Re [Mpa]	R02 [Mpa]	Rm [Mpa]	A [mm]	A [%]	Re/Rm	R02/Rm	Szer.próbki Pr.width Probebreite KV [mm]	Temp. ^{0}C	Pr.1/Test 1/Arb.1	Pr.2/Test 2/Arb.2	Pr.3/Test 3/Arb.3	Średnia avarage test Mittelwert
105716	402,0		548,0		30,1	0,73		10,0	-20	129,0	119,0	90,0	113,0
105716	458,0		606,0		29,4	0,76		10,0	-20	85,0	67,0	96,0	83,0

Badany materiał nie wykazał radioaktywności powyżej 100Bq/kg.
The tested material showed no radioactivity above 100Bq/kg.
Das getestete Material zeigte keine Radioaktivität über 100 Bq/kg.

Proces wytwarzania stali Steelmaking process Stahlherstellungsverfahren
Stal wytwarzana w procesie konwertorowym tlenowym Steel produced in BOF process Stahl hergestellt im Sauerstoffaufblasverfahren

Deklaracja Właściwości Użytkowych Nr/Declaration of Performance No./ Leistungserklärung Nr.: AMDG-2/09-CPR-13-1 Kod typu wyrobu/Code of the product type/ Kenncode des Produkttyps: S355J2 https://sections.arcelormittal.com/documentation/declaration_of_performance/EN

Z01 Stwierdzenie o zgodności: Producent deklaruje, że dostarczone wyroby są zgodne z warunkami zamówienia.
Statement of compliance: The producer guarantees that delivered goods are in accordance with the conditions of the order.
Konformitatserklarung: Der Hersteller dekliert dass die gelieferten Erzeugnisse den Bedingungen aus der Bestellung entsprechen.

A05, Z02.2
Zarządzanie Jakością – Wyroby Długie
Quality Management – Longs
Tomasz Szafrański

Z.05 UKCA 0038 22

Z.04 CE 1436 06

Wystawił: BKGD01 ORYGINAŁ/ORIGINAL 02.09.2023 10:02:27

A01

DUFERCO TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 2284 2022 **del** 18/03/22

Pag. 1

Your Ref.: OSC2260204 / 10/02/22

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

000992

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 129460A

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/2284

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

B01 Prodotto e Dimensioni / *Product and Dimension*	B11 (*)	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*										
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*										
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*										
HEA 320		S275J0 +AR	1	12,10	0,15	0,55	0,20	0,018	0,0100	0,006	0,485	0,011	0,326	
EN 10365		EN10025-2/EN10034	4	4.656	0,126	0,171	0,035	0,001		0,036				
No. 130049A	G	OSC2260203		42/000301	322	487	32	10,0	62,0	46,0	75,0	61,0	0	
HEA 340		S355J2 +AR	2	12,10	0,16	1,28	0,22	0,021	0,0130	0,025	0,460	0,011	0,446	
EN 10365		EN 10025-2/EN10034	8	10.018	0,106	0,151	0,031	0,002	0,001	0,023	0,023	0,0001		
No. 129460A	G	OSC2260204		42/000304	387	542	31	10,0	122,0	127,0	144,0	131,0	- 20	
HEA 360		S355J2 +AR	1	12,10	0,14	1,24	0,20	0,013	0,0060	0,024	0,389	0,011	0,420	
EN 10365		EN 10025-2/EN10034	4	5.343	0,109	0,167	0,031	0,003	0,002	0,020	0,021	0,0003		
No. 130653A	G	OSC2260204		42/000304	366	525	32	10,0	163,0	154,0	172,0	163,0	- 20	
HEB 360		S355J2 +AR	1	12,10	0,14	1,23	0,20	0,020	0,0070	0,026	0,515	0,011	0,427	
EN 10365		EN 10025-2/EN10034	3	5.081	0,122	0,177	0,029	0,003	0,001	0,020	0,023	0,0003		
No. 131667A	G	OSC2260204		42/000304	374	529	29	10,0	107,0	106,0	81,0	98,0	- 20	
HEB 360		S355J2 +AR	1	12,10	0,15	1,26	0,18	0,021	0,0070	0,026	0,542	0,011	0,451	
EN 10365		EN 10025-2/EN10034	3	5.082	0,129	0,189	0,035	0,003	0,002	0,019	0,024	0,0003		
No. 131668B	G	OSC2260204		42/000304	378	537	32	10,0	120,0	119,0	124,0	121,0	- 20	

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2771/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2022 DDT / GA/2284

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	Prestazione *Performance*				Norma armonizzata *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	S275JR/J0/J2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

02 N° 2022 DDT / GA/2284

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2022 **GA/2284**

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2022 DDT / GA/2284

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004

Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali / *Essential characteristics*	Prestazione / *Performance*				Norma armonizzata / *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



03 N° 2022 DDT / GA/2284

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2022 **GA/2284**

2775/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3296 2023 **del** 8/06/23

Pag. 1

Your Ref.: OSC2360630 / 24/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 139894A

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GA/3296

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
HEA 340		S355J2 +AR	1	10,30	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	4	4.350	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893A	G	OSC2360630		43/000828	364	529	34	10,0	202,0	180,0	198,0	193,3	- 20
HEA 340		S355J2 +AR	3	10,30	0,15	1,34	0,21	0,012	0,0030	0,024	0,351	0,010	0,441
EN 10365		EN 10025-2/EN10034	12	13.050	0,084	0,177	0,034	0,003	0,003	0,020	0,021	0,0004	
No. 139894A	G	OSC2360630		43/000828	372	535	32	10,0	201,0	199,0	203,0	201,0	- 20
HEB 340		S355J2 +AR	2	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	8	11.100	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

2776/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3296

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali / *Essential characteristics*	Prestazione / *Performance*				Norma armonizzata / *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



03 N° 2023 DDT / GA/3296

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3296**

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9125 2023 **del** 17/10/23

Pag. 1

Your Ref.: OSC2370485 - 16 1634 / 11/09/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 141184A

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9125

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B06 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B06 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)															
IPE 300		S275J0 +AR	1	18,10	0,10	0,74	0,20	0,010	0,0070	0,007	0,341	0,010	0,286
EN 10365		EN10025-2/EN10034:19	10	7.552	0,116	0,138	0,028	0,002	0,003	0,013	0,002		
No. 140630B	P	OSC2370485 - 16 1634		43/003777	323	456	27	10,0	245,0	220,0	260,0	241,7	0
IPE 240		S355J2 +AR	2	18,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1	24	13.186	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P	OSC2370483 - 16 1630		43/003775	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240		S355J2 +AR	1	18,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365		EN 10025-2/EN10034:1	12	6.592	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185A	P	OSC2370483 - 16 1630		43/003775	434	570	27	7,5	60,0	37,0	64,0	53,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2023 DDT / PA/9125

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

  Massimo Lama, direttore di stabilimento/ Plant manager

  Pallanzeno, 26/01/22

02 N° 2023 DDT / PA/9125

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2023 DDT / PA/9125

2781/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9125

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (Joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/9125

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9125

A01

Duferco TRAVI E PROFILATI

Aziende certificate ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110036
CODICE FISCALE 01910110036
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110036
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9172 2023 **del** 18/10/23

Pag. 1

Your Ref.: OSC2361407 16-1817 / 9/10/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: 141187

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9172

B01 Prodotto e Dimensioni / *Product and Dimension* — B11 — B02 Qualità acciaio / *Steel Grade* — B08 N. Fasci / *Number of Bundles* — B10 Lunghezza / *Lenght (m)*

Norma del prodotto / *Standard product* — Norma qualità / *Standard quality* — B08 N. Barre / *Number of Pieces* — B13 Quantità / *Mass (Kg)*

B07 Colata - Lotto / *Heat - Item* — A07 Ordine cliente N. / *Customer's order N.* — A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

	(*)				C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
					C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
					C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEB 180		S355J2 +AR		1	12,10	0,14	1,47	0,22	0,013	0,0120	0,027	0,358	0,010	0,459
EN 10365		EN 10025-2/EN10034:1		9	5.577	0,099	0,153	0,024	0,031	0,004	0,034	0,002		
No. 141321A	P	OSC2361321	16-1728		43/004024	448	586	28	10,0	42,0	42,0	40,0	41,3	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P	OSC2361317	16-172		43/003998	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184B	P	OSC2361407	16-18		43/004230	430	589	31	7,5	57,0	56,0	69,0	60,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185B	P	OSC2361407	16-18		43/004230	386	559	27	7,5	56,0	75,0	72,0	67,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,12	1,32	0,21	0,017	0,0040	0,030	0,344	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,133	0,196	0,034	0,029	0,002	0,024	0,002		
No. 141186A	P	OSC2361407	16-18		43/004230	409	570	29	7,5	43,0	44,0	44,0	43,7	- 20
IPE 240		S355J2 +AR		2	12,10	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365		EN 10025-2/EN10034:1		24	8.915	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187	P	OSC2361317	16-172		43/003998	422	564	27	7,5	43,0	72,0	60,0	58,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9172

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/9172

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9172

2786/ 3402

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000201513
PLACCA/COLATA: CE248330

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE330 L.15.1M	CE248329	0,100	1,170	0,170	0,025	0,026	0,170	0,130	0,400	0,022	0,031	0,008	0,001	0,0134	0,001	0,379	397	524	29,1
S 355 J2 +M IPE330 L.15.1M	CE248330	0,090	1,130	0,170	0,026	0,026	0,160	0,130	0,400	0,021	0,031	0,008	0,001	0,0119	0,001	0,356	393	518	30,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
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CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04034419
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202275076
Order number : 10831011
Your order : OSC2361415

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE330 L.15.1M	CE248329	130	100	106	112	-20
S 355 J2 +M IPE330 L.15.1M	CE248330	125	95	101	107	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,21.11.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA
COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 21.11.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202275076

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10831011				Su pedido: OSC2361415			
	9402440076	BETM-330X15.1	3	S355J2 + M IPE330 L.15.1M		CE248329	2.177 KG
	9402440075	BETM-330X15.1	4	S355J2 + M IPE330 L.15.1M		CE248329	2.913 KG
	9402440074	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248329	4.354 KG
	9402440073	BETM-330X15.1	6	S355J2 + M IPE330 L.15.1M		CE248330	4.354 KG
10833640				Su pedido: OSC2361513			
	9402439551	BBTM-160X12.1	5	S355J2 + M HEB160 L.12.1 M		CE248173	2.540 KG
	9402439549	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.596 KG
	9402439548	BBTM-160X12.1	9	S355J2 + M HEB160 L.12.1 M		CE248173	4.606 KG
TOTAL			42				25.540 KG

- Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001403065 / 839375

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: 9491KHJ / XA482CV

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
21	11	2023	X5735658X	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301796

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 09.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452409-1723001808 129A90A 3-0001100339

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452409

ordine cliente:
customer order: 1723001808 129A90A 3

documento di trasporto:
document of trasport DDT 0001100339

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

09/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Committente	1500011109
	ROSETTI MARINO S.P.A.
OdV	452409
Riferimento Cliente	1723001808 129A90A 3
	Quantità in UMB (NO BDG)
	PZ
	63

										Qtà
Pos.OdV	**Mark**	**Mark2**	**Profilo**	**Design.**	**Qualità**	**Resil.**	**Lungh**	**Colata**	**DDT**	PZ
10	428	#	IPE	240	S355	J2	3985	70717;	#	11
20	430	#	IPE	240	S355	J2	3985	70717;	#	9
30	420	#	IPE	240	S355	J2	3992	70717;	#	4
40	434	#	IPE	240	S355	J2	1989	70717;	#	2
50	417	#	IPE	240	S355	J2	1989	70717;	#	1
60	430A	#	IPE	240	S355	J2	3985	141187A;	1100339	7
70	427	#	IPE	240	S355	J2	2989	73172;	1100339	4
80	423	#	IPE	240	S355	J2	3592	CE623842;	1100339	2
90	422	#	IPE	240	S355	J2	2693	73172;	1100339	1
								CE623842;	1100339	2
100	426	#	IPE	240	S355	J2	3986	141187A;	1100339	1
110	431	#	IPE	240	S355	J2	3982	141187A;	1100339	12
120	432	#	IPE	240	S355	J2	3982	73172;	1100339	4
130	429	#	IPE	240	S355	J2	3982	141187A;	1100339	1
								73172;	1100339	2

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9148 2023 **del** 17/10/23

Pag. 1

Your Ref.: OSC2361317 16-1725 / 22/09/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0001100339
PLACCA/COLATA: 141187A

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9148

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
IPE 240	S355J2 +AR	1	10,50	0,12	1,32	0,21	0,017	0,0040	0,030	0,344	0,009	0,424
EN 10365	EN 10025-2/EN10034:1	12	3.834	0,133	0,196	0,034	0,029	0,002	0,024	0,002		
No. 141186B	P OSC2361317 16-172		43/003998	410	565	27	7,5	93,0	95,0	104,0	97,3	- 20
IPE 240	S355J2 +AR	2	10,50	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365	EN 10025-2/EN10034:1	24	7.668	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187A	P OSC2361317 16-172		43/003998	426	571	27	10,0	78,0	72,0	46,0	65,3	- 20
IPE 240	S355J2 +AR	1	12,10	0,13	1,28	0,21	0,017	0,0120	0,029	0,381	0,009	0,432
EN 10365	EN 10025-2/EN10034:1	12	4.417	0,166	0,165	0,029	0,029	0,002	0,024	0,002		
No. 141183D	P OSC2361248 - 16 1628		43/003774	419	570	29	7,5	48,0	57,0	56,0	53,7	- 20
IPE 240	S355J2 +AR	1	12,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365	EN 10025-2/EN10034:1	12	4.417	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P OSC2361270 16-1671		43/003862	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240	S355J2 +AR	1	12,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365	EN 10025-2/EN10034:1	12	4.417	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185A	P OSC2361270 16-1671		43/003862	434	570	27	7,5	60,0	37,0	64,0	53,7	- 20
IPE 240	S355J2 +AR	1	12,10	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365	EN 10025-2/EN10034:1	12	4.417	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187A	P OSC2361248 - 16 1628		43/003774	426	571	27	10,0	78,0	72,0	46,0	65,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9148

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/9148

2795/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9148

2796/ 3402

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0001100339
PLACCA/COLATA: 73172

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450090706
Data / Date: 26.01.2024

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: 1100688212
Comanda data / Order date: 04.12.2023

Vagon/Wagon / Auto/Truck:
HD17CHI/HD52CHI

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^oC]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	73172	S355J2+M	IPE240	1	0.368	12100	-0 / +100	412	536	29,0	300/7,5	-20	120,0	120,0	116,0	118,7
2	73171	S355J2+M	IPE240	15	5.523	12100	-0 / +100	376	509	29,0	300/7,5	-20	116,0	120,0	112,0	116,0
3	73137	S355J2+M	IPE240	8	2.950	12100	-0 / +100	396	517	27,0	300/7,5	-20	120,0	126,0	130,0	125,3
4	73136	S355J2+M	IPE240	34	12.519	12100	-0 / +100	383	508	30,0	300/7,5	-20	116,0	112,0	124,0	117,3

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73172	0,130	1,190	0,220	0,004	0,019	0,120	0,100	0,330	0,020	0,001	0,050	0,030	0,016	0,0003	0,0016	0,0088			0,395
2	73171	0,120	1,150	0,220	0,008	0,013	0,100	0,100	0,340	0,030	0,001	0,045	0,027	0,014	0,0004	0,0014	0,0090			0,376
3	73137	0,120	1,190	0,230	0,004	0,013	0,060	0,090	0,270	0,020	0,001	0,044	0,034	0,013	0,0003	0,0013	0,0088			0,367
4	73136	0,120	1,190	0,230	0,008	0,025	0,060	0,090	0,310	0,020	0,001	0,046	0,030	0,014	0,0003	0,0011	0,0080			0,370

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
Victor Dorin Suciu

CE
12/1823

Form.PC-12 rev.5

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 10369 2023 **del** 28/11/23

Pag. 1

Your Ref.: OSC2361657 - NS 16 2087 / 22/11/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0001100339
PLACCA/COLATA: 141187A

000659

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/10369

B01 Prodotto e Dimensioni / *Product and Dimension* | B11 | B02 Qualità acciaio / *Steel Grade* | B08 N. Fasci / *Number of Bundles* | B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product* | Norma qualità / *Standard quality* | B08 N. Barre / *Number of Pieces* | B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item* | A07 Ordine cliente N. / *Customer's order N.* | A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

	(*)				C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
					C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
					C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEA 120		S275J0 +AR	1	9,10	0,08	0,67	0,21	0,010	0,0100	0,005	0,392	0,010	0,259
EN 10365		EN10025-2/EN10034:19	20	3.536	0,096	0,163	0,033	0,000	0,001	0,026	0,001		
No. 141495A	P	OSC2361456 16-1884		43/004425	333	444	35	7,5	170,0	184,0	176,0	176,7	0
HEA 120		S275J0 +AR	1	9,10	0,09	0,62	0,18	0,017	0,0070	0,007	0,416	0,009	0,272
EN 10365		EN10025-2/EN10034:19	20	3.536	0,155	0,151	0,035	0,001	0,001	0,026	0,001		
No. 141501A	P	OSC2361456 16-1884		43/004425	321	438	32	7,5	160,0	162,0	163,0	161,7	0
HEA 120		S275J0 +AR	1	9,10	0,09	0,63	0,18	0,012	0,0150	0,008	0,319	0,008	0,254
EN 10365		EN10025-2/EN10034:19	20	3.536	0,085	0,130	0,026	0,001	0,002	0,025	0,001		
No. 141881A	P	OSC2361456 16-1884		43/004425	339	448	29	7,5	153,0	145,0	138,0	145,3	0
ANG 200 15		S355J2 +AR	1	12,10	0,11	1,42	0,18	0,012	0,000	0,020	0,342	0,009	0,418
EN 10056-1		EN 10025-2/EN10056-2	9	4.848	0,082	0,140	0,031	0,038	0,001	0,022	0,002		
No. 139516	P	OSC2361657 - NS 16 2		43/004930	409	542	27	10,0	123,0	87,0	137,0	115,7	- 20
IPE 240		S355J2 +AR	1	8,10	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365		EN 10025-2/EN10034:1	12	2.914	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187A	P	OSC2361407 16-18		43/004230	426	571	27	10,0	78,0	72,0	46,0	65,3	- 20
UPN 240		S355J2 +AR	2	12,10	0,13	1,24	0,21	0,013	0,0080	0,025	0,374	0,007	0,415
EN 10365		EN 10025-2/EN10279:2	24	9.410	0,095	0,175	0,035	0,029	0,003	0,027	0,002		
No. 142462C	P	OSC2361537 - NS 16 1		43/004577	415	562	28	7,5	110,0	111,0	110,0	110,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
02 N° 2023 DDT / PA/10369

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

02 N° 2023 DDT / PA/10369

2799/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2023 DDT / PA/10369

2800/ 3402

Duferco
TRAVI E PROFILATI

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/10369

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. NA

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*
   N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	–Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *Impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/10369

2801/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608
Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia
14
1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/10369

ALBARAN DE SUMINISTRO

EL CLIENTE DEBE FIRMAR Y FECHAR PARA RECIBIR LA MERC
THE CUSTOMER MUST SIGN AND DATE TO RECEIVE THE GOODS

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0001100339
PLACCA/COLATA: CE623842

CELSA GROUP — CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: DATE OF LOADING:	Nº ALBARÁN: DELIVERY NOTE NUMBER:
13.03.2023	PE4 202188120
	Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:
METALLURGICA PIEMONTESE LAVORAZIONI SRL
STRADA SETTIMA N. 5-SITIO INTERPORTO NORD
10098 RIVOLI
Italy
Tel.00390112387611

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10799689				Su pedido: 4000001553			
	9402356246	BETM-240X12.1	15	S355J2 +M IPE240 L.12.1M		CE623841	5.564 KG
	9402356253	BETM-240X12.1	15	S355J2 +M IPE240 L.12.1M		CE623842	5.554 KG
	9402356251	BETM-240X12.1	15	S355J2 +M IPE240 L.12.1M		CE623842	5.554 KG
	9402356249	BETM-240X12.1	15	S355J2 +M IPE240 L.12.1M		CE623843	5.554 KG
	9402356235	BETM-240X12.1	15	S355J2 +M IPE240 L.12.1M		CE623849	5.514 KG
TOTAL			75				27.740 KG

TEL(39)011 23 87 611;
distribuzione@mplavorazioni.it

CONTACTO / CONTACT:
andrea.monaco@mplavorazioni.it
Andrea Monaco
390112387683

Nº TRANSPORTE: 6001338029 / 775187

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: GG981MT / XA486CV

CLIENTE / CUSTOMER: 1671971

MPL S.r.l.
Via Augusto Righi 7
I-37135 VERONA VE

FECHA DE ENTREGA / Delivery Date:			RECEPCIONADO POR / Received by:	
DÍA / day	MES / month	AÑO / year	NOMBRE Y APELLIDOS / Name and Surname	FIRMA Y SELLO / Signature and Stamp
			5014811038	

MPL
DDT IN
0800007585

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fec
vez consta el número de albarán en ella Important Remark. Unless other agreement, the transport invoice will be accepted ONLY IF THE MA1
the name of the person who signs and with the delivery ticket number in it.
Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SO01 - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03882774
(B61-31BAL2)

Customer: MPL S.r.l.
Via Augusto Righi 7
37135 VERONA
Italy

Destination: METALLURGICA PIEMONTESE LAVORAZIONI
STRADA SETTIMA N. 5-SITIO INTERPORTO NORD
10098 RIVOLI
Italy

Document n°: 202188120
Order number : 10799689
Your order : 4000001553

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Tensile Str. MPA	Elong. L0= 5,65VSo %
S355J2 +M IPE240 L.12.1m	CE623841	0,090	1,370	0,160	0,022	0,021	0,170	0,140	0,440	0,021	0,067	0,005	0,002	0,0130	0,001	0,408	418	550	28,6
S355J2 +M IPE240 L.12.1m	CE623842	0,090	1,420	0,200	0,019	0,020	0,150	0,120	0,370	0,017	0,070	0,006	0,003	0,0125	0,001	0,409	418	551	28,5
S355J2 +M IPE240 L.12.1m	CE623843	0,100	1,380	0,190	0,015	0,024	0,170	0,130	0,380	0,021	0,070	0,006	0,003	0,0117	0,001	0,414	418	551	28,7
S355J2 +M IPE240 L.12.1m	CE623849	0,080	1,330	0,160	0,020	0,028	0,120	0,160	0,420	0,024	0,066	0,006	0,002	0,0109	0,001	0,384	413	544	28,6

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,13.03.2023
Juan Diego Martínez Gálvez
Quality Control Manager

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP™ CELSA BARCELONA

Sostenibilidad Siderúrgica Gestión RSE SGRS - 001/2010

CE 0095 06 CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03882774
(B61-31BRESI)

Customer: MPL S.r.l.
Via Augusto Righi 7
37135 VERONA
Italy

Destination: METALLURGICA PIEMONTESE LAVORAZIONI
STRADA SETTIMA N. 5-SITIO INTERPORTO NORD
10098 RIVOLI
Italy

Document n°: 202188120
Order number : 10799689
Your order : 4000001553

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S355J2 +M IPE240 L.12.1m	CE623841	150	118	125	131	-20
S355J2 +M IPE240 L.12.1m	CE623842	110	78	85	91	-20
S355J2 +M IPE240 L.12.1m	CE623843	117	85	92	98	-20
S355J2 +M IPE240 L.12.1m	CE623849	145	113	120	126	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,13.03.2023
Juan Diego Martínez Gálvez
Quality Control Manager

CE

0099

Compañía Española de Laminación S.L.
C/ Ferralla nº12,
Polígono Industrial San Vicente S/N
08755 Castellbisbal, Barcelona (España)
06
CELSA01BCN

celsa barcelona

EN10025-1:2004

Productos laminados en caliente de aceros para estructuras, tipos S235/S275/S355 y grados JR/J0/J2

Utilización en estructuras soldadas, atornilladas y remachadas

Características esenciales	Prestaciones

Tolerancias dimensionales y de forma

EN 10056-2	Ángulos Lados Iguales (L)
EN 10058	Barras Rectangulares
EN 10059	Barras Cuadradas
EN 10060	Barras Redondas
EN 10024	IPN
EN 10034	IPE/HE/IJB/UC
EN 10279	UPE/UPN/PFC

Alargamiento (%)

Según tipo y grado	Según espesor nominal (mm)		
	≥3≤40	>40≤63	>63≤100
S235JR / J0 / J2	26	25	24
S275JR / J0 / J2	23	22	21
S355JR / J0 / J2	22	21	20

Resistencia a la tracción (MPa)

Según tipo y grado	Según espesor nominal (mm)
	≥3 ≤100
S235JR / J0 / J2	360 a 510
S275JR / J0 / J2	410 a 560
S355JR / J0 / J2	470 a 630

Límite elástico (MPa)

Según tipo y grado	Según espesor nominal (mm)				
	≤16	>16≤40	>40≤63	>63≤80	>80≤100
S235JR / J0 / J2	235	225	215	215	215
S275JR / J0 / J2	275	265	255	245	235
S355JR / J0 / J2	355	345	335	325	315

Resistencia flexión por choque (Julios)

Según tipo y grado	Temperatura (ºC)	Espesor nominal ≤150 mm
S235/275/355 JR	20	27
S235/275/355 J0	0	27
S235/275/355 J2	-20	27

Soldabilidad (Composición Química)

Según tipo y grado	CEVN máx		
	≥1≤40	>30≤40	>40≤150
S235JR/ J0/ J2	0,35	0.35	0.38
S275JR / J0 / J2	0,40	0.40	0.42
S355JR / J0 / J2	0,45	0.47	0.47

Durabilidad (Composición Química)

Según tipo y grado	C % máx		Si % máx	Mn % máx	P % máx	S % máx	N % máx	Cu % máx
	≤40	>40						
S235JR	0,19	0,21	---	1,50	0,045	0,045	0,014	0,60
S235J0	0,19	0,19	---	1,50	0,040	0,040	0,014	0,60
S235J2	0,19	0,19	---	1,50	0,035	0,035	---	0,60
S275JR	0,24	0,25	---	1,60	0,045	0,045	0,014	0,60
S275J0	0,21	0,21	---	1,60	0,040	0,040	0,014	0,60
S275J2	0,21	0,21	---	1,60	0,035	0,035	---	0,60
S355JR	0,27	0,27	0,60	1,70	0,045	0,045	0,014	0,60
S355J0	0,23	0,24	0,60	1,70	0,040	0,040	0,014	0,60
S355J2	0,23	0,24	0,60	1,70	0,035	0,035	---	0,60

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301799

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **13.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452409-1723001808 129A90A 3-0000103773

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452409

ordine cliente:
customer order: 1723001808 129A90A 3

documento di trasporto:
document of trasport DDT 0000103773

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

13/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
140	MSTR	428A	#	IPE2403523985	75287;	103773	12.02.2024	1
150	MSTR	418	#	IPE2403522989	75287;	103773	12.02.2024	2
160	MSTR	420A	#	IPE2403523992	75287;	103773	12.02.2024	1
170	MSTR	421	#	IPE2403523492	75287;	103773	12.02.2024	4
180	MSTR	422A	#	IPE2403522693	75287;	103773	12.02.2024	1
190	MSTR	425	#	IPE2403523991	75287;	103773	12.02.2024	3
200	MSTR	429A	#	IPE2403523982	75287;	103773	12.02.2024	1
210	MSTR	430B	#	IPE2403523985	75287;	103773	12.02.2024	8
220	MSTR	435	#	IPE2403523742	75287;	103773	12.02.2024	2
230	MSTR	436	#	IPE2403523743	75287;	103773	12.02.2024	2
240	MSTR	437	#	IPE2403523743	75287;	103773	12.02.2024	2
250	MSTR	438	#	IPE2403523743	75287;	103773	12.02.2024	2
260	MSTR	439	#	IPE2403523754	75287;	103773	12.02.2024	2
270	MSTR	440	#	IPE2403523754	75287;	103773	12.02.2024	2

MANNI SIPRE
STEEL ENGINEERING

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000103773
PLACCA/COLATA: 75287

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2811/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2812/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2813/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance					Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993			EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000			
Yield strength	Nominal thickness (mm)		Values			
	>	≤	min (MPa)			
		16	355			
	16	40	345			
Tensile strength	Nominal thickness (mm)		Values			
	≥	≤	min (MPa)	max (MPa)		
	3	100	470	630		
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values			
	≥	≤	min (%)			
	3	40	22			
Impact strength	Nominal thickness (mm)		Values			
	>	≤	min (J)			
		100	27 at -20°C			
Weldability CEV	Nominal thickness (mm)		Values			
	>	≤		max (%)		
		30		0,45		
	30	40		0,47		
Durability	Nominal thickness (mm)		Values			
	>	≤		max (%)		
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C					

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i.A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2814/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 848/1-2024
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	75287	IPE 240	EN 10365	18.100 mm	20	11.035 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
75287	0,08	0,22	1,48	0,016	0,016	0,011	0,020	0,043	0,009	0,07

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
75287	0,22	0,12	0,03	0,024	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
75287	387	547	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
75287	KV 450/7.5	L	-20 °C	14 / 20	110	109	135	118

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 848/1-2024**
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance					Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993			EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000			
Yield strength	Nominal thickness (mm)		Values			
	>	≤	min (MPa)			
		16	355			
	16	40	345			
Tensile strength	Nominal thickness (mm)		Values			
	≥	≤	min (MPa)	max (MPa)		
	3	100	470	630		
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values			
	≥	≤	min (%)			
	3	40	22			
Impact strength	Nominal thickness (mm)		Values			
	>	≤	min (J)			
		100	27 at -20°C			
Weldability CEV	Nominal thickness (mm)		Values			
	>	≤		max (%)		
		30		0,45		
	30	40		0,47		
Durability	Nominal thickness (mm)		Values			
	>	≤		max (%)		
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C					

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2818/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301803

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **14.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000455976-O.172300108 4 LOTTO-0000400955

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000455976

ordine cliente:
customer order: O.172300108 4 LOTTO

documento di trasporto:
document of trasport DDT 0000400955

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
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F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

14/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80619160

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80619160
DDT	400955
OdV	455976
Riferimento Cliente	O.172300108 4 LOTTO
	Quantità in UMB (NO BDG)
	PZ
	7

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	10	457	#	HEA5003523983	46176;	3
900002	20	476	#	HEA5003523985	46176;	3
900003	20	476	#	HEA5003523985	24958;	1

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100657367
A07 Your reference : OSC2270450
03.10.2022
MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000400955
PLACCA/COLATA: 46176

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

Mill Test Certificate NrX 4736128

Delivery note number 4736128 from 15 November 2022 A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 500 A	20.100 mm	3,081 to	46176	3,081 to		1
000002	HE 500 A	24.100 mm	3,695 to	46176	3,695 to		1

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
46176		0,06	0,70	0,021	0,019	0,16	0,009	0,004	0,33	0,17	0,12	0,033	0,002	0,050	0,001	0,0004	0,25

Heat nr B07		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	UNAGED mm C41	°C C03	J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
46176		445	539	24,84	FL.1/3	L		-20	107	147	74	109

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100657367

A07 Your reference : OSC2270450
03.10.2022

MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4736128

Delivery note number 4736128 from 15 November 2022

A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000455976
RIF. ORDINE: O.172300108 4 LOTTO
DDT: 0000400955
PLACCA/COLATA: 24958

Certificate Nr X 4448989

Delivery note number 4448989 from 20 August 2021 A03

A08 Our reference : 1100629439
A07 Your reference : OSC2180420
01.07.2021
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000003	HE 500 A	20.100 mm	15,380 to	24958	15,380 to		5

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55								0,43
24958		0,07	0,88	0,021	0,018	0,18	0,013	0,003	0,34	0,16	0,11	0,033	0,008	0,050	0,001	0,0003	0,29

Heat nr B07		Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
24958		457	529	26,62	FL.1/3	L		-20	141	141	114	132

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration:

Klecker Roberto
Porteur de signature spéciale
Z03

Z04
CE
0769
06

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Certificate Nr X 4448989

Delivery note number 4448989 from 20 August 2021 A03

A08 Our reference : 1100629439
A07 Your reference : OSC2180420
01.07.2021
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Klecker Roberto
Porteur de signature spéciale

Z03

Z04
CE
0769
06

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301804

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani **14.02.2024**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452409-1723001808 129A90A 3-0000900411

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452409

ordine cliente:
customer order: 1723001808 129A90A 3

documento di trasporto:
document of trasport DDT 0000900411

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

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63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

14/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80618775

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80618775
DDT	900411
OdV	452409
Riferimento Cliente	1723001808 129A90A 3
	Quantità in UMB (NO BDG)
	PZ
	27

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	10	428	#	IPE2403523985	70717;	8
900002	10	428	#	IPE2403523985	70717;	3
900003	20	430	#	IPE2403523985	70717;	8
900004	20	430	#	IPE2403523985	70717;	1
900005	30	420	#	IPE2403523992	70717;	4
900006	40	434	#	IPE2403521989	70717;	2
900007	50	417	#	IPE2403521989	70717;	1

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452409
RIF. ORDINE: 1723001808 129A90A 3
DDT: 0000900411
PLACCA/COLATA: 70717

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2831/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2832/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2790/6-2023**
Advice No. 800150897

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
26	70716	IPE 240	EN 10365	18.100 mm	48	26.475 kg
26	70717	IPE 240	EN 10365	18.100 mm	8	4.420 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70716	0,10	0,18	1,44	0,016	0,016	0,009	0,016	0,039	0,007	0,09
70717	0,10	0,18	1,42	0,016	0,016	0,010	0,016	0,040	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70716	0,29	0,14	0,03	0,022	0,39
70717	0,27	0,13	0,04	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70716	402	559	25,0	
70717	392	546	26,0	

Z03 Works inspector
René Merbach

Z02 29.06.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2790/6-2023**
Advice No. 800150897

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
70716	KV 450/7.5	L	-20 °C	14 / 20	109	105	109	107
70717	KV 450/7.5	L	-20 °C	14 / 20	157	59	121	112

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 29.06.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT
2834/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301805

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

14.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000452309-1723001808 .129A90A-0000900412

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000452309

ordine cliente:
customer order: 1723001808 .129A90A

documento di trasporto:
document of trasport DDT 0000900412

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

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0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

14/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	60	384	#	HEA3403525988	72415;	3

Consegna	**80618774**

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80618774
DDT	900412
OdV	452309
Riferimento Cliente	1723001808 .129A90A
	Quantità in UMB (NO BDG)
	PZ
	3

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000452309
RIF. ORDINE: 1723001808 .129A90A
DDT: 0000900412
PLACCA/COLATA: 72415

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

2839/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2840/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2200/9-2023**
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	72412	HE 340A	EN 10365	18.100 mm	2	3.800 kg
2	72415	HE 340A	EN 10365	18.100 mm	4	7.600 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72412	0,09	0,19	1,45	0,020	0,020	0,008	0,014	0,041	0,009	0,08
72415	0,07	0,18	1,43	0,018	0,021	0,010	0,016	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72412	0,28	0,14	0,03	0,024	0,38
72415	0,31	0,12	0,03	0,021	0,36

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72412	409	528	33,0	
72415	407	514	32,0	

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23

032 CPR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2200/9-2023**
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72412	KV 450	L	-20 °C	19 / 27	74	115	104	97
72415	KV 450	L	-20 °C	19 / 27	132	135	137	134

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301818

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

21.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000461272-O.1732001808 5 LOTTO-0000104685

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000461272

ordine cliente:
customer order: O.1732001808 5 LOTTO

documento di trasporto:
document of trasport DDT 0000104685

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
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www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
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MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

21/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
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MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000461272-O.1732001808 5 LOTTO-0000104685

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000461272

ordine cliente:
customer order: O.1732001808 5 LOTTO

documento di trasporto:
document of trasport DDT 0000104685

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
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F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Scc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

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T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

21/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
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63076 Monteprandone (AP) | ITALY | Via Scopa, 20
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI **SIPRE**
STEEL ENGINEERING

#VALORE!	#VALORE!

										Qtà
			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
Cliente	1500011109		10	MSTR	588	#	IPE2403521193	75287;	104685	20.02.2024	1
	ROSETTI MARINO S.P.A.		20	MSTR	592	#	IPE2403521192	75287;	104685	20.02.2024	1
OdV	461272		30	MSTR	589	#	IPE2403521094	75287;	104685	20.02.2024	4
Riferiment	O.1732001808 5 LOTTO		40	MSTR	590	#	IPE240352988	75287;	104685	20.02.2024	1
			50	MSTR	591	#	IPE240352933	75287;	104685	20.02.2024	1

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000451272
RIF. ORDINE: O.1732001808 5 LOTTO
DDT: 0000104685
PLACCA/COLATA: 75287

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2850/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0836

   British Board of Agrément
   Bucknalls Lane
   Watford
   Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2852/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 848/1-2024**
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	75287	IPE 240	EN 10365	18.100 mm	20	11.035 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
75287	0,08	0,22	1,48	0,016	0,016	0,011	0,020	0,043	0,009	0,07

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
75287	0,22	0,12	0,03	0,024	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
75287	387	547	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
75287	KV 450/7.5	L	-20 °C	14 / 20	110	109	135	118

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 848/1-2024
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0836

   British Board of Agrément
   Bucknalls Lane
   Watford
   Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2856/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301820

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: **22.02.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000457465-1723001808 129A90A 4-0000202191

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000457465
production code

ordine cliente: — 1723001808 129A90A 4
customer order:

documento di trasporto: — DDT 0000202191
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

21/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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26013 Crema (CR) | ITALY | Via Gaeta, 23
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33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 28710

Certificate Nr X 4512904

Delivery note number 4512904 from 12 December 2021 A03

A08 Our reference : 1100638242

A07 Your reference : OSC2161656
03.12.2021
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	IPE 330	15.100 mm	10,239 to	28706	1,463 to		2
				28710	8,776 to		12
000003	IPE 330	13.100 mm	10,154 to	28706	10,154 to		16

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,43**
28706	0,07	1,13	0,018	0,018	0,18	0,010	0,001	0,33	0,16	0,09	0,005	0,035	0,040	0,020	0,0002	0,32
28710	0,08	1,15	0,025	0,024	0,16	0,010	0,001	0,41	0,17	0,12	0,005	0,034	0,040	0,020	0,0003	0,34

Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV			UNAGED			J	
	ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	**355**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
28706	412	506	28,89	FL.1/3	L		-20	123	143	145	137
28710	426	522	28,42	FL.1/3	L		-20	99	128	138	122

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034

Klecker Roberto
Porteur de signature spéciale

Z03

Z04

CE
0769
06

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1
2860/ 3402

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Certificate Nr X 4512904

Delivery note number 4512904 from 12 December 2021 A03

A08 Our reference : 1100638242

A07 Your reference : OSC2161656
03.12.2021
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Klecker Roberto
Porteur de signature spéciale

Z03

Z04

CE
0769
06

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1
2861/ 3402

EN 10168:2004

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 68674

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2863/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2209/4-2023
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	68674	HE 340A	EN 10365	12.100 mm	4	5.075 kg
3	68384	HE 220B	EN 10365	12.100 mm	8	6.935 kg
3	68385	HE 220B	EN 10365	12.100 mm	2	1.750 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
68384	0,08	0,19	1,44	0,019	0,020	0,010	0,014	0,039	0,009	0,09
68385	0,09	0,18	1,43	0,014	0,006	0,009	0,019	0,040	0,008	0,08
68674	0,08	0,20	1,44	0,018	0,016	0,011	0,015	0,037	0,008	0,07

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
68384	0,23	0,13	0,03	0,022	0,37
68385	0,21	0,12	0,05	0,023	0,38
68674	0,27	0,13	0,03	0,023	0,37

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68384	415	519	32,0	
68385	428	516	32,0	

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

0769
2864/ 34023
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2209/4-2023**
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68674	399	528	33,0	

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
68384	KV 450	L	-20 °C	19 / 27	145	176	151	157
68385	KV 450	L	-20 °C	19 / 27	190	186	224	200
68674	KV 450	L	-20 °C	19 / 27	130	140	155	141

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2865/ 34023

STAHLWERK THÜRINGEN

A03 Certificate No. 2209/4-2023
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2866/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 2588 2023 **del** 2/05/23

Pag. 1

Your Ref.: OSC2360626 / 21/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 138092B

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/2588

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension* B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
Norma del prodotto / *Standard product*	Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*									
B07 Colata - Lotto / *Heat - Item*	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)											
IPE 360	S275J0 +AR	2	12,10	0,14	0,55	0,20	0,015	0,0060	0,005	0,345	0,009	0,306
EN 10365	EN10025-2/EN10034	16	11.137	0,123	0,181	0,039	0,002		0,022			
No. 139406A	G OSC2360626		43/000821	338	471	34	10,0	131,0	136,0	133,0	133,3	0
HEA 340	S355J2 +AR	1	12,10	0,14	1,24	0,20	0,030	0,0090	0,023	0,476	0,010	0,441
EN 10365	EN 10025-2/EN10034	2	2.560	0,210	0,161	0,026	0,003	0,002	0,020	0,022	0,0004	
No. 138092B	G OSC2360623		43/000820	370	530	32	10,0	139,0	144,0	145,0	142,7	- 20
HEA 400	S355J2 +AR	1	12,10	0,16	1,26	0,18	0,010	0,0090	0,022	0,311	0,010	0,426
EN 10365	EN 10025-2/EN10034	2	3.047	0,089	0,150	0,031	0,003	0,002	0,015	0,019	0,0004	
No. 137674B	G OSC2360623		43/000820	358	514	35	10,0	147,0	149,0	153,0	149,7	- 20
HEA 400	S355J2 +AR	3	12,10	0,14	1,22	0,19	0,015	0,0080	0,024	0,418	0,011	0,425
EN 10365	EN 10025-2/EN10034	9	13.716	0,116	0,217	0,047	0,004	0,001	0,020	0,020	0,0004	
No. 138617A	G OSC2360623		43/000820	367	522	32	10,0	151,0	155,0	149,0	151,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo
2867/ 3402

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE
02 N° 2023 DDT / GA/2588

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/2588**

2869/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/2588

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40	> 40 ÷ ≤ 63		
	S355JR/J0/J2	≥ 22	≥ 21		
	S355K2	≥ 20	≥ 19		
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)	KV min		
	S355JR	20	27		
	S355J0	0	27		
	S355J2	- 20	27		
	S355K2	- 20	40		
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/2588**

2871/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3296 2023 **del** 8/06/23

Pag. 1

Your Ref.: OSC2360630 / 24/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 139893A

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3296

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 340		S355J2 +AR	1	10,30	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	4	4.350	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893A	G	OSC2360630		43/000828	364	529	34	10,0	202,0	180,0	198,0	193,3	- 20
HEA 340		S355J2 +AR	3	10,30	0,15	1,34	0,21	0,012	0,0030	0,024	0,351	0,010	0,441
EN 10365		EN 10025-2/EN10034	12	13.050	0,084	0,177	0,034	0,003	0,003	0,020	0,021	0,0004	
No. 139894A	G	OSC2360630		43/000828	372	535	32	10,0	201,0	199,0	203,0	201,0	- 20
HEB 340		S355J2 +AR	2	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	8	11.100	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI 2872/ 3402

Quality Manager
Daniele Lombardo

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3296

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3296**

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3344 2023 **del** 9/06/23

Pag. 1

Your Ref.: OSC2360647 / 27/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 139893B

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3344

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
			C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)													
HEA 260		S275J0 +AR	2	12,10	0,14	0,52	0,19	0,014	0,0050	0,006	0,436	0,010	0,308
EN 10365		EN10025-2/EN10034	16	13.272	0,137	0,173	0,035	0,002		0,018			
No. 138663C	G	OSC2360647		43/000855	339	483	34	10,0	146,0	157,0	143,0	148,7	0
HEA 340		S355J2 +AR	2	12,10	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	8	10.218	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893B	G	OSC2360630		43/000828	366	531	33	10,0	197,0	188,0	193,0	192,7	- 20
HEB 340		S355J2 +AR	1	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	4	5.550	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo
2875/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/3344**

2877/ 3402

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3344**

2879/ 3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: 219914

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099
AMOL-2/09-CPR-13-1
EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19769680102627	**IPE 330**	**9,1 m.**	**10**	**219914**	**4.371**

1 paquetes **10 barras** **4.371 Kg**

TRANSPORTISTA
AMGEL VAZQUEZ FERNANDEZ N.I.F. 35777488E

OPERADOR DE TRANSPORTE
AMBROGIO TRASPORTI, S.P.A. VIA F.LLI KENNEDY 1 10048 VINOVO ITALIA V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

2880/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1765516

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	219914	,06	,95	,19	,017	,021	,012	,004	,130	,360	,180	,024	,026						,28

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	219914	386	479	32,5		-20º	7,5	150	161	156	156

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
AMGEL VAZQUEZ FERNANDEZ N.I.F. 35777488E

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

OPERADOR DE TRANSPORTE
AMBROGIO TRASPORTI, S.P.A. VIA F.LLI KENNEDY 1 10048 VINOVO ITALIA V.A.T. IT00510420011

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

2881/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1765516

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-84027	**10/3/23**	**OSC2360380**	**8/3/23**	**4/5/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE SPA** VIA SCOPA 20 63076 MONTEPRANDONE ITALIA CAMIÓN EN:MONTEPRANDONE

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
manuela.bruni@mannigroup.com
COVER MATERIAL

Ref: 1100668894

TRANSPORTISTA

AMGEL VAZQUEZ FERNANDEZ

N.I.F. 35777488E

OPERADOR DE TRANSPORTE

AMBROGIO TRASPORTI, S.P.A.
VIA F.LLI KENNEDY 1
10048 VINOVO
ITALIA
V.A.T. IT00510420011

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
25.820	**40.940**	**4.371**

VEHICULO / REMOLQUE	POR EXPEDICIONES
4994LWJ / AM4216 **ANGEL VAZQUEZ FERNANDEZ** **D.N.I. 35777488E**	Alvaro Lopez 10:19 11:58

Olaberría, jueves, 4 de mayo de 2023

2882/3402

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			**Prestazione**		**Specifica tecnica armonizzata**
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

2884/ 3402

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: CE245302

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914320
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202203850
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M HEA340 L.15.1M	CE245302	0,100	1,320	0,180	0,012	0,022	0,130	0,120	0,410	0,024	0,073	0,005	0,002	0,0110	0,001	0,403	413	544	30,3

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
CELSA
CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914320
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202203850
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.15.1M	CE245302	118	86	93	99	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 02.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202203850

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10800803				Su pedido: OSC2360367			
	9402363910	BB05-200X9.1	9	S 275 J0 + AR HEB200 L.9.1 M		CE245020	4.994 KG
10803741				Su pedido: OSC2360502			
	9402369205	BA05-140X15.1	15	S 275 J0 + AR HEA140 L. 15,1M		CE245312	5.386 KG
10807604				Su pedido: OSC2360634			
	9402368941	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.654 KG
	9402368937	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.633 KG
	9402368936	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.633 KG
TOTAL			33				24.300 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00 Viernes: 08:00-12:00/14:00-16:00 14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001350224 / 786560

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: 9492KHJ / XA842AL

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
02	05	2023	46728371F	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly filled and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: CE245303

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914641
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202199701
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M HEA340 L.12.1M	CE245303	0,100	1,340	0,180	0,013	0,027	0,170	0,130	0,420	0,021	0,074	0,007	0,003	0,0108	0,001	0,413	402	529	29,9

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914641
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202199701
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.12.1M	CE245303	128	97	102	109	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 02.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202199701

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy
Tel:(39)045 6339535

DATOS TRANSPORTISTA / CARRIER DATA: NIF: LV50103602

sia grafa auto
lituania
LITUANIA
LETONIA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10805966				Su pedido: OSC2360594			
	9402360609	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.357 KG
	9402360608	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.358 KG
	9402360606	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.358 KG
10807604				Su pedido: OSC2360634			
	9451316622	BATM-340X12.1	4	S 355 J2 + M HEA340 L.12.1 M		CE245303	4.967 KG
TOTAL			28				21.040 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00
Viernes: 08:00-12:00/14:00-16:00 14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001347023 / 783269

TRANSPORTISTA / CARRIER: SENNDER IBERIA S.L.
JOSE ORTEGA Y GASSET 20-6º
28006 MADRID
ESPAÑA

MATRÍCULA / VEHICLE REG. NUMBER: BT4004 / U7997

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA / day	MES / month	AÑO / year	NIF Y FIRMA / NIF and Signature	SELLO / Stamp
02	05	2023	FE326897	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
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CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202191
PLACCA/COLATA: CE245715

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03928595
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202212396
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M HEA340 L.12.1M	CE245715	0,080	1,320	0,190	0,029	0,030	0,100	0,120	0,510	0,020	0,065	0,009	0,002	0,0134	0,001	0,379	396	523	28,9

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,23.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03928595
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202212396
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.12.1M	CE245715	119	89	95	101	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,23.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 23.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202212396

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: 49555333Q
BENIGNO HERNANDEZ HERNANDEZ
AVDA. CASTELLNOU, 176
08191 RUBI
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10803745				Su pedido: OSC2360503			
	9402373894	BB05-220X12.1	6	S 275 J0 + AR HEB220 L.12,1M		CE245459	5.057 KG
10807604				Su pedido: OSC2360634			
	9402378831	BATM-340X12.1	3	S 355 J2 + M HEA340 L.12.1 M		CE245715	3.732 KG
	9402378830	BATM-340X12.1	4	S 355 J2 + M HEA340 L.12.1 M		CE245715	4.967 KG
10810523				Su pedido: OSC2360720			
	9402379773	BA05-100X14.1	4	S275J0 + AR HEA100 L.14.1M		CE245678	913 KG
	9402379806	BA05-100X14.1	21	S275J0 + AR HEA100 L.14.1M		CE624867	4.806 KG
	9402377048	BE05-200X14.1	15	S275J0 + AR IPE200 L.14.1M		CE245571	4.585 KG
TOTAL			53				24.060 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001356344 / 793435

TRANSPORTISTA / CARRIER: TRANS ITALIA SRL
PIAZZA MARTINEZ, 5
I-84085 MERCATO SAN SEVERINO (SA)

MATRÍCULA / VEHICLE REG. NUMBER: 8961KZM / XA270GY

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
23	05	2023	49555333Q	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301828

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000462237-1723001808 5 LOTTO-0000105335

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000462237
production code

ordine cliente: — 1723001808 5 LOTTO
customer order:

documento di trasporto: — DDT 0000105335
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

27/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78



#VALORE!	#VALORE!

			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	Qtà PZ
Cliente	1500011109		10	MSTR	161	#	HEA3403523985	76634;	105335	26.02.2024	2
	ROSETTI MARINO S.P.A.		20	MSTR	583	#	HEA3403523985	76634;	105335	26.02.2024	1
OdV	462237		30	MSTR	178	#	HEA3403523982	76634;	105335	26.02.2024	1
Riferiment	1723001808 5 LOTTO		40	MSTR	181	#	HEA3403523982	76634;	105335	26.02.2024	1
			50	MSTR	558	#	HEA3403523985	76634;	105335	26.02.2024	1
	Quantità		60	MSTR	587	#	IPE3303523982	225536;	105335	26.02.2024	1

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000462237
RIF. ORDINE: 1723001808 5 LOTTO
DDT: 0000105335
PLACCA/COLATA: 76634

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2899/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2901/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 829/2-2024
Advice No. 800168997

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	76742	HE 140M	EN 10365	18.100 mm	4	4.510 kg
9	76634	HE 340A	EN 10365	20.100 mm	3	6.265 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
76634	0,08	0,19	1,45	0,016	0,021	0,012	0,015	0,039	0,008	0,08
76742	0,09	0,20	1,42	0,022	0,022	0,011	0,020	0,039	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
76634	0,24	0,14	0,04	0,021	0,37
76742	0,34	0,16	0,04	0,021	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
76634	415	515	30,0	
76742	427	532	31,0	

Z03 Works inspector
René Merbach

Z02 08.02.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
2902/ 3402 24
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 829/2-2024**
Advice No. 800168997

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
76634	KV 450	L	-20 °C	19 / 27	141	128	145	138
76742	KV 450	L	-20 °C	19 / 27	134	99	50	94

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 08.02.2024

Z04

UK 0836
24
032 UK CPR 2022-01-01 SWT

0769
2903/ 3402
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2905/ 3402

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000462237
RIF. ORDINE: 1723001808 5 LOTTO
DDT: 0000105335
PLACCA/COLATA: 76634

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2907/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2909/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030329
A07 Your Order No.: OSC2370657

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 479/2-2024**
Advice No. 800168558

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
9	76634	HE 340A	EN 10365	20.100 mm	3	6.275 kg
10	76634	HE 340A	EN 10365	24.100 mm	4	9.995 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
76634	0,08	0,19	1,45	0,016	0,021	0,012	0,015	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
76634	0,24	0,14	0,04	0,021	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
76634	415	515	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
76634	KV 450	L	-20 °C	19 / 27	141	128	145	138

Z03 Works inspector
René Merbach

Z02 05.02.2024

Z04

UK 0836
24
032 UK CPR 2022-01-01 SWT

0769
2910/ 3402
24
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030329
A07 Your Order No.: OSC2370657

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 479/2-2024
Advice No. 800168558

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 05.02.2024

Z04

UK 0836
24
032 UK CPR 2022-01-01 SWT

0769
2911/ 3402
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2913/ 3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000462237
RIF. ORDINE: 1723001808 5 LOTTO
DDT: 0000105335
PLACCA/COLATA: 225536

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871339838	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340029	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340232	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.455**
19768871340247	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340525	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871339364	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.454**
19768871339511	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.455**
7 paquetes			**28 barras**		**24.180 Kg**

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

2914/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

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A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

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A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1818651

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225533	,08	1,01	,20	,023	,024	,010	,003	,140	,450	,220	,034	,028						,33
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225533	403	504	34,1		-20º	7,5	107	121	36	88
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

2 / 2 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
MARTIN RODRIGUEZ O NORBERTO ALMANDOZ 5-1º B 20100 ERRENTERIA GIPUZKOA N.I.F. 34095204G

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

29/15/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

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A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

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MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCKS PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
spedizioni.crema@mannigroup.com
marianna.rigamonti@mannigroup.com
COVER MATERIAL

Ref: 1100685201

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

2916/3402

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			**Prestazione**		**Specifica tecnica armonizzata**
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

2918/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301830

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

28.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000457465-1723001808 129A90A 4-0000202565

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000457465
production code

ordine cliente: — 1723001808 129A90A 4
customer order:

documento di trasporto: — DDT 0000202565
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

28/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202565
PLACCA/COLATA: 68674

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2923/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2209/4-2023**
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	68674	HE 340A	EN 10365	12.100 mm	4	5.075 kg
3	68384	HE 220B	EN 10365	12.100 mm	8	6.935 kg
3	68385	HE 220B	EN 10365	12.100 mm	2	1.750 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
68384	0,08	0,19	1,44	0,019	0,020	0,010	0,014	0,039	0,009	0,09
68385	0,09	0,18	1,43	0,014	0,006	0,009	0,019	0,040	0,008	0,08
68674	0,08	0,20	1,44	0,018	0,016	0,011	0,015	0,037	0,008	0,07

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
68384	0,23	0,13	0,03	0,022	0,37
68385	0,21	0,12	0,05	0,023	0,38
68674	0,27	0,13	0,03	0,023	0,37

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68384	415	519	32,0	
68385	428	516	32,0	

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2924/ 34023
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2209/4-2023**
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68674	399	528	33,0	

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
68384	KV 450	L	-20 °C	19 / 27	145	176	151	157
68385	KV 450	L	-20 °C	19 / 27	190	186	224	200
68674	KV 450	L	-20 °C	19 / 27	130	140	155	141

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2925/ 34023

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 2209/4-2023
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

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0769
2926/ 3402
032 CPR 2020-10-01 SWT

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1559 2023 **del** 15/03/23

Pag. 1

Your Ref.: OSC2360106 / 25/01/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

000992

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202565
PLACCA/COLATA: 138092B

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/1559

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 240		S275J0 +AR	1	15,10	0,14	0,55	0,19	0,015	0,0050	0,007	0,499	0,011	0,325
EN 10365		EN10025-2/EN10034	6	5.434	0,174	0,198	0,037	0,001		0,023			
No. 138070B	G	OSC2360106		43/000183	348	488	35	10,0	148,0	150,0	154,0	150,7	0
HEB 240		S275J0 +AR	2	15,10	0,14	0,54	0,19	0,013	0,0100	0,005	0,468	0,010	0,310
EN 10365		EN10025-2/EN10034	8	9.995	0,110	0,176	0,032	0,001		0,022			
No. 138059A	G	OSC2360106		43/000183	329	480	31	10,0	135,0	106,0	130,0	123,7	0
HEA 280		S355J2 +AR	1	15,10	0,13	1,24	0,21	0,022	0,0050	0,029	0,450	0,009	0,421
EN 10365		EN 10025-2/EN10034	6	6.884	0,167	0,139	0,026	0,003	0,002	0,023	0,022	0,0004	
No. 135685C	G	OSC2360106		43/000183	362	530	31	10,0	147,0	152,0	148,0	149,0	- 20
HEA 340		S355J2 +AR	1	15,10	0,14	1,24	0,20	0,030	0,0090	0,023	0,476	0,010	0,441
EN 10365		EN 10025-2/EN10034	4	6.307	0,210	0,161	0,026	0,003	0,002	0,020	0,022	0,0004	
No. 138092B	G	OSC2360106		43/000183	370	530	32	10,0	139,0	144,0	145,0	142,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo
2927/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GA/1559

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/1559**

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/1559

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/1559**

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3344 2023 **del** 9/06/23

Pag. 1

Your Ref.: OSC2360647 / 27/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202565
PLACCA/COLATA: 139893B

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3344

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*									
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
HEA 260		S275J0 +AR	2	12,10	0,14	0,52	0,19	0,014	0,0050	0,006	0,436	0,010	0,308
EN 10365		EN10025-2/EN10034	16	13.272	0,137	0,173	0,035	0,002		0,018			
No. 138663C	G	OSC2360647		43/000855	339	483	34	10,0	146,0	157,0	143,0	148,7	0
HEA 340		S355J2 +AR	2	12,10	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	8	10.218	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893B	G	OSC2360630		43/000828	366	531	33	10,0	197,0	188,0	193,0	192,7	- 20
HEB 340		S355J2 +AR	1	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	4	5.550	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo
2932/ 3402

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE
02 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/3344**

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3344

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3344**

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202565
PLACCA/COLATA: CE245303

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914641
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202199701
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M HEA340 L.12.1M	CE245303	0,100	1,340	0,180	0,013	0,027	0,170	0,130	0,420	0,021	0,074	0,007	0,003	0,0108	0,001	0,413	402	529	29,9

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
CELSA
CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914641
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202199701
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.12.1M	CE245303	128	97	102	109	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 02.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202199701

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy
Tel:(39)045 6339535

DATOS TRANSPORTISTA / CARRIER DATA: NIF: LV50103602

sia grafa auto
lituania
LITUANIA
LETONIA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10805966				Su pedido: OSC2360594			
	9402360609	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.357 KG
	9402360608	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.358 KG
	9402360606	BE05-360X12.1	8	S 275 J0 + AR IPE360 L. 12,1M		CE244862	5.358 KG
10807604				Su pedido: OSC2360634			
	9451316622	BATM-340X12.1	4	S 355 J2 + M HEA340 L.12.1 M		CE245303	4.967 KG
TOTAL			28				21.040 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00
Viernes: 08:00-12:00/14:00-16:00 14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001347023 / 783269

TRANSPORTISTA / CARRIER: SENNDER IBERIA S.L.
JOSE ORTEGA Y GASSET 20-6º
28006 MADRID
ESPAÑA

MATRÍCULA / VEHICLE REG. NUMBER: BT4004 / U7997

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA / day	MES / month	AÑO / year	NIF Y FIRMA / NIF and Signature	SELLO / Stamp
02	05	2023	FE326897	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202565
PLACCA/COLATA: CE245715

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03928595
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202212396
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M HEA340 L.12.1M	CE245715	0,080	1,320	0,190	0,029	0,030	0,100	0,120	0,510	0,020	0,065	0,009	0,002	0,0134	0,001	0,379	396	523	28,9

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,23.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03928595
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202212396
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.12.1M	CE245715	119	89	95	101	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,23.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 23.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202212396

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: 49555333Q
BENIGNO HERNANDEZ HERNANDEZ
AVDA. CASTELLNOU, 176
08191 RUBI
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10803745				Su pedido: OSC2360503			
	9402373894	BB05-220X12.1	6	S 275 J0 + AR HEB220 L.12,1M		CE245459	5.057 KG
10807604				Su pedido: OSC2360634			
	9402378831	BATM-340X12.1	3	S 355 J2 + M HEA340 L.12.1 M		CE245715	3.732 KG
	9402378830	BATM-340X12.1	4	S 355 J2 + M HEA340 L.12.1 M		CE245715	4.967 KG
10810523				Su pedido: OSC2360720			
	9402379773	BA05-100X14.1	4	S275J0 + AR HEA100 L.14.1M		CE245678	913 KG
	9402379806	BA05-100X14.1	21	S275J0 + AR HEA100 L.14.1M		CE624867	4.806 KG
	9402377048	BE05-200X14.1	15	S275J0 + AR IPE200 L.14.1M		CE245571	4.585 KG
TOTAL			53				24.060 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001356344 / 793435

TRANSPORTISTA / CARRIER: TRANS ITALIA SRL
PIAZZA MARTINEZ, 5
I-84085 MERCATO SAN SEVERINO (SA)

MATRÍCULA / VEHICLE REG. NUMBER: 8961KZM / XA270GY

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
23	05	2023	49555333Q	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301833

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

01.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000464447-1723001808 AGGIUNTA-0000401409

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000464447

ordine cliente:
customer order: 1723001808 AGGIUNTA

documento di trasporto:
document of trasport DDT 0000401409

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911 F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236 Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento: MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23 T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20 T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5 T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

29/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | PIVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | PIVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3690011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 57513 12
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000464447
RIF. ORDINE: 1723001808 AGGIUNTA
DDT: 0000401409
PLACCA/COLATA: 76634

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2947/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0836

   British Board of Agrément
   Bucknalls Lane
   Watford
   Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2949/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 829/2-2024**
Advice No. 800168997

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	76742	HE 140M	EN 10365	18.100 mm	4	4.510 kg
9	76634	HE 340A	EN 10365	20.100 mm	3	6.265 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
76634	0,08	0,19	1,45	0,016	0,021	0,012	0,015	0,039	0,008	0,08
76742	0,09	0,20	1,42	0,022	0,022	0,011	0,020	0,039	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
76634	0,24	0,14	0,04	0,021	0,37
76742	0,34	0,16	0,04	0,021	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
76634	415	515	30,0	
76742	427	532	31,0	

Z03 Works inspector
René Merbach

Z02 08.02.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2022-01-01 SWT

2950/3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 829/2-2024**
Advice No. 800168997

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
76634	KV 450	L	-20 °C	19 / 27	141	128	145	138
76742	KV 450	L	-20 °C	19 / 27	134	99	50	94

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 08.02.2024

Z04

UK CA
UK 0838
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2022-01-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2953/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301834

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 01.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000464800-1723001808-0000401413

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000464800
production code

ordine cliente: — 1723001808
customer order:

documento di trasporto: — DDT 0000401413
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scapa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

29/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | PIVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | PIVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scapa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI **SIPRE**
STEEL ENGINEERING

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	10	531	#	HEA3403523985	76635;	2

Consegna	**80628592**

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80628592
DDT	401413
OdV	464800
Riferimento Cliente	1723001808
	Quantità in UMB (NO BDG)
	PZ
	2

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000464800
RIF. ORDINE: 1723001808
DDT: 0000401413
PLACCA/COLATA: 76635

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30	C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2959/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0836

   British Board of Agrément
   Bucknalls Lane
   Watford
   Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2961/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 486/2-2024**
Advice No. 800168584

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
8	76635	HE 340A	EN 10365	18.100 mm	3	5.670 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
76635	0,12	0,19	1,43	0,015	0,008	0,009	0,015	0,039	0,007	0,07

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
76635	0,18	0,17	0,04	0,023	0,41

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
76635	410	555	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
76635	KV 450	L	-20 °C	19 / 27	89	58	89	78

Z03 Works inspector
René Merbach

Z02 05.02.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 CPR 2020-10-01 SWT

2962/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20030332
A07 Your Order No.: OSC2380501

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 486/2-2024
Advice No. 800168584

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 05.02.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
24
032 2963/3402 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2965/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301841

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000457465-1723001808 129A90A 4-0000202834

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000457465
production code

ordine cliente: — 1723001808 129A90A 4
customer order:

documento di trasporto: — DDT 0000202834
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202834
PLACCA/COLATA: 68674

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\ \sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

2969/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2209/4-2023
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	68674	HE 340A	EN 10365	12.100 mm	4	5.075 kg
3	68384	HE 220B	EN 10365	12.100 mm	8	6.935 kg
3	68385	HE 220B	EN 10365	12.100 mm	2	1.750 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
68384	0,08	0,19	1,44	0,019	0,020	0,010	0,014	0,039	0,009	0,09
68385	0,09	0,18	1,43	0,014	0,006	0,009	0,019	0,040	0,008	0,08
68674	0,08	0,20	1,44	0,018	0,016	0,011	0,015	0,037	0,008	0,07

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
68384	0,23	0,13	0,03	0,022	0,37
68385	0,21	0,12	0,05	0,023	0,38
68674	0,27	0,13	0,03	0,023	0,37

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68384	415	519	32,0	
68385	428	516	32,0	

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04 CE 0769

2970/ 3402

032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2209/4-2023**
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68674	399	528	33,0	

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
68384	KV 450	L	-20 °C	19 / 27	145	176	151	157
68385	KV 450	L	-20 °C	19 / 27	190	186	224	200
68674	KV 450	L	-20 °C	19 / 27	130	140	155	141

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2971/ 34023

STAHLWERK THÜRINGEN

A03 **Certificate No. 2209/4-2023**
Advice No. 800146120

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026244
A07 Your Order No.: OSC2360481

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 28.04.2023

Z04

CE

0769
2972/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1559 2023 **del** 15/03/23

Pag. 1

Your Ref.: OSC2360106 / 25/01/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202834
PLACCA/COLATA: 138092B

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/1559

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 240		S275J0 +AR	1	15,10	0,14	0,55	0,19	0,015	0,0050	0,007	0,499	0,011	0,325
EN 10365		EN10025-2/EN10034	6	5.434	0,174	0,198	0,037	0,001		0,023			
No. 138070B	G	OSC2360106		43/000183	348	488	35	10,0	148,0	150,0	154,0	150,7	0
HEB 240		S275J0 +AR	2	15,10	0,14	0,54	0,19	0,013	0,0100	0,005	0,468	0,010	0,310
EN 10365		EN10025-2/EN10034	8	9.995	0,110	0,176	0,032	0,001		0,022			
No. 138059A	G	OSC2360106		43/000183	329	480	31	10,0	135,0	106,0	130,0	123,7	0
HEA 280		S355J2 +AR	1	15,10	0,13	1,24	0,21	0,022	0,0050	0,029	0,450	0,009	0,421
EN 10365		EN 10025-2/EN10034	6	6.884	0,167	0,139	0,026	0,003	0,002	0,023	0,022	0,0004	
No. 135685C	G	OSC2360106		43/000183	362	530	31	10,0	147,0	152,0	148,0	149,0	- 20
HEA 340		S355J2 +AR	1	15,10	0,14	1,24	0,20	0,030	0,0090	0,023	0,476	0,010	0,441
EN 10365		EN 10025-2/EN10034	4	6.307	0,210	0,161	0,026	0,003	0,002	0,020	0,022	0,0004	
No. 138092B	G	OSC2360106		43/000183	370	530	32	10,0	139,0	144,0	145,0	142,7	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI 2973/ 3402

Quality Manager
Daniele Lombardo

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GA/1559

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/1559**

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/1559

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40	> 40 ÷ ≤ 63		
	S355JR/J0/J2	≥ 22	≥ 21		
	S355K2	≥ 20	≥ 19		
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)	KV min		
	S355JR	20	27		
	S355J0	0	27		
	S355J2	- 20	27		
	S355K2	- 20	40		
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/1559**

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

05/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301842

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **06.03.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000457465-1723001808 129A90A 4-0000202831

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000457465
production code

ordine cliente: — 1723001808 129A90A 4
customer order:

documento di trasporto: — DDT 0000202831
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

MANNI SIPRE S.p.A.

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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63076 Montepradone (AP) | ITALY | Via Scopa, 20
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- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

05/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
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ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: 73136

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450090706
Data / Date 26.01.2024

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: 1100688212
Comanda data / Order date: 04.12.2023

Vagon/Wagon / Auto/Truck:
HD17CHI/HD52CHI

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	73172	S355J2+M	IPE240	1	0.368	12100	-0 / +100	412	536	29,0	300/7,5	-20	120,0	120,0	116,0	118,7
2	73171	S355J2+M	IPE240	15	5.523	12100	-0 / +100	376	509	29,0	300/7,5	-20	116,0	120,0	112,0	116,0
3	73137	S355J2+M	IPE240	8	2.950	12100	-0 / +100	396	517	27,0	300/7,5	-20	120,0	126,0	130,0	125,3
4	73136	S355J2+M	IPE240	34	12.519	12100	-0 / +100	383	508	30,0	300/7,5	-20	116,0	112,0	124,0	117,3

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73172	0,130	1,190	0,220	0,004	0,019	0,120	0,100	0,330	0,020	0,001	0,050	0,030	0,016	0,0003	0,0016	0,0088			0,395
2	73171	0,120	1,150	0,220	0,008	0,013	0,100	0,100	0,340	0,030	0,001	0,045	0,027	0,014	0,0004	0,0014	0,0090			0,376
3	73137	0,120	1,190	0,230	0,004	0,013	0,060	0,090	0,270	0,020	0,001	0,044	0,034	0,013	0,0003	0,0013	0,0088			0,367
4	73136	0,120	1,190	0,230	0,008	0,025	0,060	0,090	0,310	0,020	0,001	0,046	0,030	0,014	0,0003	0,0011	0,0080			0,370

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte oţel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
Victor Dorin Suciu

CE
12/1823

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: 73172

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450090706
Data / Date 26.01.2024

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: 1100688212
Comanda data / Order date: 04.12.2023

Vagon/Wagon / Auto/Truck:
HD17CHI/HD52CHI

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
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Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73172	0,130	1,190	0,220	0,004	0,019	0,120	0,100	0,330	0,020	0,001	0,050	0,030	0,016	0,0003	0,0016	0,0088			0,395
2	73171	0,120	1,150	0,220	0,008	0,013	0,100	0,100	0,340	0,030	0,001	0,045	0,027	0,014	0,0004	0,0014	0,0090			0,376
3	73137	0,120	1,190	0,230	0,004	0,013	0,060	0,090	0,270	0,020	0,001	0,044	0,034	0,013	0,0003	0,0013	0,0088			0,367
4	73136	0,120	1,190	0,230	0,008	0,025	0,060	0,090	0,310	0,020	0,001	0,046	0,030	0,014	0,0003	0,0011	0,0080			0,370

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte oţel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
Victor Dorin Suciu

CE
12/1823

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: 73172

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450090816
Data / Date 30.01.2024

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: OSC2460043
Comanda data / Order date: 15.01.2024

Vagon/Wagon / Auto/Truck: CJ26WES/CJ35JSP

Prebon nr. / Prebon no.: 1100690424

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	73176	S355J2+M	IPE240	6	2.254	12100	-0 / +100	375	514	30,0	300/7,5	-20	90,0	98,0	106,0	98,0
2	73172	S355J2+M	IPE240	10	3.756	12100	-0 / +100	412	536	29,0	300/7,5	-20	120,0	120,0	116,0	118,7
3	73171	S355J2+M	IPE240	5	1.893	12100	-0 / +100	376	509	29,0	300/7,5	-20	116,0	120,0	112,0	116,0
4	73135	S355J2+M	IPE240	4	1.502	12100	-0 / +100	371	497	31,0	300/7,5	-20	128,0	132,0	134,0	131,3

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73176	0,110	1,150	0,250	0,008	0,020	0,100	0,090	0,350	0,020	0,001	0,040	0,025	0,014	0,0003	0,0013	0,0100			0,363
2	73172	0,130	1,190	0,220	0,004	0,019	0,120	0,100	0,330	0,020	0,001	0,050	0,030	0,016	0,0003	0,0016	0,0088			0,395
3	73171	0,120	1,150	0,220	0,008	0,013	0,100	0,100	0,340	0,030	0,001	0,045	0,027	0,014	0,0004	0,0014	0,0090			0,376
4	73135	0,110	1,170	0,230	0,007	0,025	0,060	0,100	0,300	0,020	0,001	0,044	0,031	0,014	0,0003	0,0010	0,0089			0,356

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte oţel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
Victor Dorin Suciu

CE
12/1823

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3296 2023 **del** 8/06/23

Pag. 1

Your Ref.: OSC2360630 / 24/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: 139893A

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3296

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 340		S355J2 +AR	1	10,30	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	4	4.350	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893A	G	OSC2360630		43/000828	364	529	34	10,0	202,0	180,0	198,0	193,3	- 20
HEA 340		S355J2 +AR	3	10,30	0,15	1,34	0,21	0,012	0,0030	0,024	0,351	0,010	0,441
EN 10365		EN 10025-2/EN10034	12	13.050	0,084	0,177	0,034	0,003	0,003	0,020	0,021	0,0004	
No. 139894A	G	OSC2360630		43/000828	372	535	32	10,0	201,0	199,0	203,0	201,0	- 20
HEB 340		S355J2 +AR	2	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	8	11.100	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo
2985/ 3402

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3296

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3296**

2987/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3296 2023 **del** 8/06/23

Pag. 1

Your Ref.: OSC2360630 / 24/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: 139894A

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3296

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 340		S355J2 +AR	1	10,30	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	4	4.350	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893A	G	OSC2360630		43/000828	364	529	34	10,0	202,0	180,0	198,0	193,3	- 20
HEA 340		S355J2 +AR	3	10,30	0,15	1,34	0,21	0,012	0,0030	0,024	0,351	0,010	0,441
EN 10365		EN 10025-2/EN10034	12	13.050	0,084	0,177	0,034	0,003	0,003	0,020	0,021	0,0004	
No. 139894A	G	OSC2360630		43/000828	372	535	32	10,0	201,0	199,0	203,0	201,0	- 20
HEB 340		S355J2 +AR	2	10,30	0,16	1,33	0,21	0,012	0,0040	0,023	0,363	0,010	0,444
EN 10365		EN 10025-2/EN10034	8	11.100	0,092	0,161	0,030	0,003	0,002	0,020	0,020	0,0004	
No. 139892A	G	OSC2360630		43/000828	370	532	30	10,0	175,0	190,0	193,0	186,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI 2988/ 3402

Quality Manager
Daniele Lombardo

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3296

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40	> 40 ÷ ≤ 63		
	S355JR/J0/J2	≥ 22	≥ 21		
	S355K2	≥ 20	≥ 19		
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)	KV min		
	S355JR	20	27		
	S355J0	0	27		
	S355J2	- 20	27		
	S355K2	- 20	40		
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3296**

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000457465
RIF. ORDINE: 1723001808 129A90A 4
DDT: 0000202831
PLACCA/COLATA: CE245302

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914320
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202203850
Order number : 10807604
Your order : OSC2360634

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M HEA340 L.15.1M	CE245302	0,100	1,320	0,180	0,012	0,022	0,130	0,120	0,410	0,024	0,073	0,005	0,002	0,0110	0,001	0,403	413	544	30,3

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
Steel making: Electric arc melting and rolled process.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA)
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 03914320
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202203850
Order number : 10807604
Your order : OSC2360634

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M HEA340 L.15.1M	CE245302	118	86	93	99	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,02.05.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 02.05.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202203850

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF:
IT01347580332
FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10800803				Su pedido: OSC2360367			
	9402363910	BB05-200X9.1	9	S 275 J0 + AR HEB200 L.9.1 M		CE245020	4.994 KG
10803741				Su pedido: OSC2360502			
	9402369205	BA05-140X15.1	15	S 275 J0 + AR HEA140 L. 15,1M		CE245312	5.386 KG
10807604				Su pedido: OSC2360634			
	9402368941	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.654 KG
	9402368937	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.633 KG
	9402368936	BATM-340X15.1	3	S 355 J2 + M HEA340 L.15.1 M		CE245302	4.633 KG
TOTAL			33				24.300 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 08:00-12:00 Viernes: 08:00-12:00/14:00-16:00 14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001350224 / 786560

TRANSPORTISTA / CARRIER: FERTRANS S.R.L.
VIA VITTORIO ALFIERI 128
I-20099 SESTO SAN GIOVANNI (MI)

MATRÍCULA / VEHICLE REG. NUMBER: 9492KHJ / XA842AL

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA / day	MES / month	AÑO / year	NIF Y FIRMA / NIF and Signature	SELLO / Stamp
02	05	2023	46728371F	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARAN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1723001743	122A70C	Q012301669

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2300624 / 1**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **3501435**

Date: **07-12-2023**

Order Status: **incomplete**

Inspection Dates
First: **28-11-2023**

final: **06-12-2023**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1723001743 122A70C**

Description:

43 piece(s) of steel plate(s) **256664 kg** , as per attached inspection Certificate no.: **A0377700**

Specification

S460MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

LRQA004 11.2021

14-DEC-2023

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2300624-1

Z02 Date 07-12-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0377700	A08 Order-No.:	3501435	A07 OrderDat.	19-10-2023 400F

A06 Customer	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	1723001743 122A70C	B04 Delivery condition	thermomechanical rolled + accelerated cooled		
A06 Consignee	Rosetti Marino Spa Via Trieste 230 I-48122 RAVENNA				

A10 - Supplementary information
Project :
BOURI

B03 - Supplementary requirements
MATERIAL FINE GRAINED, FULLY KILLED, MADE BY BOF AND MADE TO FINE GRAIN PRACTICE. // MATERIAL IS ACCORDING TO EN10225 (2019) OPTIONS 2, 6, 7 AND 8. TECHNICAL CLARIFICATION SHEET 122A70C-MTO-ST-002 REV. 01 IS RESPECTED.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
756793	225067/11	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023	1PLATCS20052
756793	225068/2	80	20,00	2400,0	12000	1		4.634	89645	06-12-2023	1PLATCS20052
756793	225068/1	80	20,00	2400,0	12000	1		4.634	89650	07-12-2023	1PLATCS20052
761019	223659/1	40	30,00	2500,0	12000	1		7.142	89649	07-12-2023	1PLATCS30052
761893	223373/1	10	40,00	2500,0	12000	1		9.589	89649	07-12-2023	1PLATCS40047
761893	223374/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023	1PLATCS40047
761893	223375/1	10	40,00	2500,0	12000	1		9.587	89649	07-12-2023	1PLATCS40047
761893	223376/1	10	40,00	2500,0	12000	1		9.587	89649	07-12-2023	1PLATCS40047
761893	223377/1	10	40,00	2500,0	12000	1		9.585	89650	07-12-2023	1PLATCS40047
761893	223378/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023	1PLATCS40047
761893	223394/1	60	25,00	2400,0	8100	1		3.896	89645	06-12-2023	1PLATCS25057
761893	223394/3	60	25,00	2400,0	8100	1		3.895	89648	06-12-2023	1PLATCS25057
761893	223394/2	60	25,00	2400,0	8100	1		3.894	89645	06-12-2023	1PLATCS25057

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch reference no.
761893	223395/3	60	25,00	2400,0	8100	1		3.900	89645	06-12-2023 1PLATCS25057
761893	223395/2	60	25,00	2400,0	8100	1		3.898	89645	06-12-2023 1PLATCS25057
761893	223395/1	60	25,00	2400,0	8100	1		3.900	89645	06-12-2023 1PLATCS25057
761893	223396/1	60	25,00	2400,0	8100	1		3.901	89645	06-12-2023 1PLATCS25057
761893	223396/3	60	25,00	2400,0	8100	1		3.901	89645	06-12-2023 1PLATCS25057
761893	223397/1	50	25,00	2400,0	12000	1		5.771	89648	06-12-2023 1PLATCS25057
761893	223398/2	50	25,00	2400,0	12000	1		5.772	89649	07-12-2023 1PLATCS25057
761893	223398/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223399/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223399/2	50	25,00	2400,0	12000	1		5.773	89648	06-12-2023 1PLATCS25057
761893	223400/2	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223400/1	50	25,00	2400,0	12000	1		5.772	89648	06-12-2023 1PLATCS25057
761893	223401/2	50	25,00	2400,0	12000	1		5.749	89649	07-12-2023 1PLATCS25057
761893	223401/1	50	25,00	2400,0	12000	1		5.748	89649	07-12-2023 1PLATCS25057
761893	223402/2	50	25,00	2400,0	12000	1		5.750	89648	06-12-2023 1PLATCS25057
761893	223402/1	50	25,00	2400,0	12000	1		5.748	89649	07-12-2023 1PLATCS25057
761894	223212/2	30	40,00	2500,0	8000	1		6.353	89592	05-12-2023 1PLATCS40047
761894	223381/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223382/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223384/1	10	40,00	2500,0	12000	1		9.587	89650	07-12-2023 1PLATCS40047
761894	223403/2	70	25,00	2000,0	12000	1		4.794	89648	06-12-2023 1PLATCS25057
761894	223403/1	70	25,00	2000,0	12000	1		4.794	89648	06-12-2023 1PLATCS25057
761895	223413/2	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223413/1	80	20,00	2400,0	12000	1		4.636	89648	06-12-2023 1PLATCS20052
761895	223414/1	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223414/2	80	20,00	2400,0	12000	1		4.636	89649	07-12-2023 1PLATCS20052
761895	223415/2	80	20,00	2400,0	12000	1		4.632	89645	06-12-2023 1PLATCS20052
761895	223416/1	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
761895	223416/2	80	20,00	2400,0	12000	1		4.636	89645	06-12-2023 1PLATCS20052
865238	225033/1	30	40,00	2500,0	8000	1		6.362	89648	06-12-2023 1PLATCS40047
	Sum					43		256.664		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Dimensional tolerances acc. EN 10029/11
EN10163-2: Class A3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
	>=						.015															
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
756793		.032	.331	1.600	.009	.0005	.032	.171	.170	.007	.163	.003	.034	.011	.0051	.0002	.0020	.0019	.0020	.0020	.0020	.36
761019		.032	.322	1.610	.006	.0011	.034	.173	.170	.006	.160	.004	.036	.012	.0060	.0002	.0020	.0027	.0020	.0020	.0020	.36
761893		.032	.317	1.640	.007	.0008	.041	.177	.170	.005	.160	.005	.036	.013	.0054	.0003	.0020	.0016	.0030	.0020	.0020	.36
761894		.026	.317	1.620	.006	.0005	.039	.175	.170	.004	.164	.004	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020	.0020	.35
761895		.028	.344	1.620	.005	.0006	.042	.175	.170	.004	.158	.005	.036	.012	.0052	.0003	.0020	.0024	.0020	.0020	.0020	.36
865238		.031	.341	1.620	.007	.0007	.038	.181	.170	.009	.159	.004	.036	.013	.0060	.0002	.0020	.0022	.0020	.0020	.0020	.36

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.110	
756793	.14	.037	.048	6.27
761019	.14	.040	.052	5.67
761893	.15	.041	.054	7.59
761894	.14	.040	.053	7.96
761895	.14	.041	.053	8.08
865238	.15	.040	.053	6.33

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						420	520		17.0	
Set values	<=							700			93.00
761019	223659	30,0	30.33	F	O	T	538	605	A5	22.9	89.01
761893	223375	30,0	41.07	F	O	T	533	615	A5	21.8	86.79
	223378	30,0	41.09	F	O	T	507	599	A5	22.5	84.69
761894	223381	30,0	41.21	F	O	T	504	595	A5	23.7	84.65
	223383	30,0	41.14	F	O	T	502	589	A5	23.4	85.17
865238	225033	30,0	40.43	F	O	T	516	609	A5	22.9	84.68
	>=						440	520		17.0	
Set values	<=							700			93.00
756793	225068	30,0	20.59	F	O	T	537	599	A5	22.8	89.62
761893	223395	30,0	25.42	F	O	T	530	592	A5	22.4	89.60
	223396	30,0	25.50	F	O	T	555	614	A5	20.7	90.43
	223400	30,0	25.34	F	O	T	530	595	A5	23.9	89.09
	223401	30,0	25.43	F	O	T	573	625	A5	22.4	91.78
761894	223403	30,0	25.74	F	O	T	539	600	A5	24.9	89.91
761895	223413	30,0	20.64	F	O	T	516	604	A5	21.4	85.40
	223419	30,0	20.61	F	O	T	529	582	A5	22.8	90.91

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J
Set values	>=					-40	42	42	42	60
	<=									
756793	225068	CV 10x10	F	O	T	-40	368	369	354	364
	225068	CV 10x10	F	O	L	-40	358	373	367	366
761019	223659	CV 10x10	F	O	T	-40	342	376	317	345
	223659	CV 10x10	F	O	L	-40	359	368	379	369
761893	223375	CV 10x10	F	O	T	-40	380	374	368	374
	223375	CV 10x10	F	O	L	-40	363	370	375	369
	223378	CV 10x10	F	O	T	-40	389	371	384	381
	223378	CV 10x10	F	O	L	-40	376	374	374	375
	223396	CV 10x10	F	O	T	-40	379	360	361	367
	223396	CV 10x10	F	O	L	-40	389	374	372	378
	223400	CV 10x10	F	O	T	-40	382	361	352	365
	223400	CV 10x10	F	O	L	-40	368	361	374	368
	223401	CV 10x10	F	O	T	-40	385	373	374	378
	223401	CV 10x10	F	O	L	-40	359	365	372	366
761894	223381	CV 10x10	F	O	T	-40	365	393	357	372
	223381	CV 10x10	F	O	L	-40	386	367	384	379
	223383	CV 10x10	F	O	T	-40	406	383	368	386
	223383	CV 10x10	F	O	L	-40	384	369	381	378
	223403	CV 10x10	F	O	T	-40	384	397	409	397
	223403	CV 10x10	F	O	L	-40	378	394	379	384
761895	223413	CV 10x10	F	O	T	-40	377	394	390	387
	223413	CV 10x10	F	O	L	-40	416	405	390	404
	223419	CV 10x10	F	O	T	-40	315	374	339	343
	223419	CV 10x10	F	O	L	-40	383	382	413	393
865238	225033	CV 10x10	F	O	T	-40	385	362	385	377
	225033	CV 10x10	F	O	L	-40	388	373	371	377

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J

O: surface
C02;Dir:
L: longitudinal
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
756793	205575	.031	.326	1.600	.009	.0007	.030	.172	.170	.006	.163	.003	.035	.011	.0049	.0002	.0020	.0016	.0020	.0020
761019	216794	.030	.323	1.610	.006	.0009	.035	.171	.170	.005	.156	.003	.035	.012	.0062	.0002	.0020	.0025	.0020	.0020
761893	223378	.029	.321	1.620	.007	.0004	.041	.172	.170	.004	.157	.004	.035	.013	.0055	.0002	.0020	.0018	.0020	.0020
761894	223380	.026	.323	1.610	.007	.0004	.041	.179	.170	.006	.158	.004	.035	.012	.0053	.0002	.0020	.0014	.0020	.0020
761895	223419	.027	.341	1.620	.006	.0004	.042	.170	.170	.004	.157	.004	.035	.012	.0051	.0002	.0020	.0025	.0020	.0020
865238	225033	.031	.341	1.610	.007	.0008	.036	.173	.170	.010	.157	.003	.036	.013	.0055	.0002	.0020	.0020	.0020	.0020

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.120	.110	
756793	205575	.0020	.0020	.36	.14	.038	.049	6.12
761019	216794	.0020	.0020	.36	.14	.038	.050	5.65
761893	223378	.0020	.0020	.36	.14	.039	.052	7.45
761894	223380	.0020	.0020	.35	.14	.039	.051	7.74
761895	223419	.0020	.0020	.35	.14	.039	.051	8.24
865238	225033	.0020	.0020	.36	.14	.039	.052	6.55

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
LRQA
Witnessed Monitored Reviewed
Name: Michael Messerer
Signature
Date:
Ref. No.:
Office: Vienna
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Reisinger Patrick

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

14-DEC-2023

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
GABRIELLI SPA UNIPERSONALE	1723001231	123A40C	Q012301647

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

06.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

gabrielli
steel service centre

Gabrielli S.p.A. - Società Unipersonale
Sede legale e amministrativa: Via Mazzini, 58
35013 Cittadella (PD) Italy - C.P. n. 52/B
Tel. +39.049.9414611 - Fax +39.049.9414664
Deposito Marghera: Via dei Sali, 3 - 30175 Marghera (VE)

Cap. Soc. Euro 20.000.000,00 I. V.
Reg. Impr. PD 00362740284 - R.E.A. PD120850 M
PD005320 - **C.F. e P. IVA: IT 00362740284**
e-mail: info.gab@gabrielli.it
www.gabrielli.it

GRUPPO gabrielli
STEEL SERVICE NETWORK

Covolo di Pederobba, 06/12/2023

(54110)
Spett.le Ditta
ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA
RA

Oggetto: Certificati

Con la presente Vi trasmettiamo in allegato copie conformi agli originali dei certificati e/o eventuali attestati di conformità inerenti i documenti di trasporto di seguito elencati:

DDT: 23005413 del 05/12/2023

Direzione e coordinamento SO.FI.D.A. S.p.A.

Distinti Saluti

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi

Divisione Coils
35013 Cittadella (PD) Italy - Via Mazzini, 58
Tel. +39.049.9414781
Comparto Bassarena: Via Bassarena, 8/C
e-mail: info.dco@gabrielli.it

Divisione Lamiere Grosse
35013 Cittadella (PD) Italy
Via dell'Industria, 38 - Z.I.
Tel. +39.049.9415511
e-mail: info.dlg@gabrielli.it

Divisione Lunghi
35015 Galliera Veneta (PD) Italy - Via Leonardo da Vinci, 25 - Tel. +39.049.5968844
31040 Covolo di Pederobba (TV) Italy - Via Guizza, 25 - Tel. +39.0423.680411
36040 Grumolo delle Abbadesse (VI) Italy - Via Nazionale, 82 - Tel. +39.0444.580680
e-mail: info.dpl@gabrielli.it

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo / Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
1 TRAVE IPE 180 S355J2 EN10025-2										
02300089800073	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900030	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900026	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000074	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700024	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800081	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900069	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700025	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800076	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700030	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800077	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800065	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000070	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000026	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000060	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700020	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000041	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000016	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000032	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089800059	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000069	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000073	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900014	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000050	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700029	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700023	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800060	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700027	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700021	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000040	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800063	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900018	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000066	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000061	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000021	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000022	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700017	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900017	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000031	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900060	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000051	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700015	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga Matricola	Articolo Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900061	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900063	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000035	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000020	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000036	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800080	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900045	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900072	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900019	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000034	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000058	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900015	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000045	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000047	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900064	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900071	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000065	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

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Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089700016	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000025	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000053	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000054	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000062	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900036	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900051	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000019	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700013	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700026	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000029	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000030	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900035	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900055	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900067	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800070	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000059	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900040	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800071	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000055	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800082	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

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Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900068	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000063	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900027	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900022	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800066	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900021	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700014	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800078	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000056	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900070	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800079	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900025	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800062	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900048	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000072	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000044	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000067	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000018	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800064	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000064	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800069	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900033	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700018	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

gabrielli
steel service centre

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Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.:SA 23025500 DEL 30/11/2023 N.DDT: 23005413 DEL 05/12/2023 1723001231-SEZIONE E1-E2

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo

Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300088900057	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900050	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800072	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900020	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900013	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000014	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000024	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000068	1	2612	18100	E7	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000042	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000017	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900052	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700019	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900065	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900046	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000038	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900023	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900049	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000046	1	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900037	1	3115	18100	E4	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900031	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000028	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800075	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900056	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000071	1	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900066	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

gabrielli
steel service centre

Gabrielli S.p.A. - Società Unipersonale
Sede Legale e amministrativa : Via Mazzini, 58 - 35013 Cittadella (PD) Italy - C.P.n. 52/B - Tel.:+39.049.9414611 - Fax +39.049.9414664 - e-mail: info@gab.gabrielli.it - www.gabrielli.it
C.F. - P.IVA IT 00362740284 - Reg. Impresa PD 00362740284 - R.E.A. PD 120850 - M. PD005320 - Cap. Soc. Euro 20.000.000,00 I.V. Direzione e coordinamento SO.FI.DA. S.r.l.
Azienda con sistema di gestione qualità certificato da DNV = ISO 9001 = (Spianatura e taglio di lamiere in fogli e nastri ricavati da coils laminati a caldo.
Commercio e lavorazione di lamiere grosse da treno quarto. Commercio di prodotti siderurgici e pre-lavorazione di profili strutturali (taglio e foratura travi)

Magazzino Divisione Lunghi Covolo

LISTA DI RINTRACCIABILITA'

ORD. INT.: **SA 23025500** DEL **30/11/2023** N.DDT: **23005413** DEL **05/12/2023** **1723001231-SEZIONE E1-E2**

CLIENTE: ROSETTI MARINO SPA
VIA TRIESTE, 230
48122 RAVENNA (RA) IT

DESTIN.: GABREX
VIA ACHILLE GRANDI, 3
48123 RAVENNA (RA) IT

Lavorato dal 04/12/23 al 04/12/23

Riga | Articolo

Matricola	Pz	Lung.	L.Or.	Marca	DoP For.	Nr.Certificato	Colata	Ddt For.		Fornitore
02300089800061	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089700028	1	3110	18100	E6	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800074	2	3612	18100	E2	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000043	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800068	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089000013	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800083	2	3112	18100	E5	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900039	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300088900041	1	3615	18100	E1	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH
02300089800067	2	3610	18100	E3	032 CPR 2020-10-01 SWT(0769)	1485/5-2023	69287	800147772	17.05.23	Stahlwerk Thuringen GmbH

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 1485/5-2023
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	69287	IPE 180	EN 10365	18.100 mm	78	26.615 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
69287	0,09	0,19	1,42	0,018	0,015	0,012	0,017	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
69287	0,25	0,11	0,03	0,017	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
69287	383	549	27,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
69287	KV 450/7.5	L	-20 °C	14 / 20	97	113	130	113

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51575 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026199
A07 Your Order No.: 336/V

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1485/5-2023**
Advice No. 800147772

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06
Gabrielli SPA
Via Mazzini, 58 - C.P. 52/B
I-35013 Cittadella

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 17.05.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA2302550 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE
3016/3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Cu: 0,55 Mn: 1,60 Ni: 0,42 P: 0,030 Cr: 0,29 S: 0,030 Mo: 0,11 Si: 0,55	
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

.....
Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

Articolo
TRAVE IPE 180 S355J2 EN10025-2

DsCli: ROSETTI MARINO SPA
VsOrd: 1723001231-SEZIONE E
NsOrd: SA23025500 del: 30/11/2023
NsDDT: 23005413 del: 05/12/2023

GABRIELLI S.p.A. Unipersonale
Divisione Lunghi
Certificato: 51576 del: 06/12/2023
COPIA CONFORME ALL'ORIGINALE
3017/3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	Job	Barcode
METINVEST TRAMETAL SPA	1723000958	123A40D	Q012301272

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma / MTSMD Signature: Sonia Emiliani

Data / Date: 01.09.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

CERTIFICATO DI CONTROLLO 3.2 / INSPECTION CERTIFICATE 3.2 - EN 10204:2004

METINVEST
METINVEST TRAMETAL SPA

Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V
Registered office: Via XII Ottobre 1, 5° piano - 16121 Genova, Italy
Phone +39 010 5762911 - Fax +39 010 5762990
Works: Via E. Fermi, 44 - 33058 San Giorgio di Nogaro UD, Italy
Phone +39 0431 629989 - Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v.
C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 - REA 437720/GE
http://trametal.metinvestholding.com

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;
N° = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZING ROLLING ;
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR;
R = RICOTTO / ANNEALED;
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + TEMPERED
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR
(D) Ceq_1 = C + Mn/6 ; Ceq_2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B*5
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

A06 Cliente / Customer

ROSETTI MARINO SPA
Via trieste 230
48122 RAVENNA RA
IT

A03 N° Certificato / Certificate no.	A02 Data / Date
51753	01/09/2023
A08 N° Ordine Trametal / Works order	A07 N° Ordine cliente / Customer's order
32303190	1723000958 12
DDT	del / date
Pratica / File no.	2023/TS/862/01
del / date	30/08/2023

B06 Marcatura di prodotto / Marking of the product
LAMIERA/ORDINE/N° INFORNAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE
PLATE/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK

B01/B02/B03

Prodotto / Product	Lamiere / Hot rolled plates
Qualità / Steel grade	S355NL
Normativa / Specification	EN10025-3:2019

B07 ITEM	B07 LAMIERA PLATE	B07 N° INFORN. INTERNAL NUMBER	B09/B11 DIMENSIONI DIMENSIONS [mm]	B12 MASSA TEORICA [t] THEORICAL WEIGHT	B07 LOTTO BATCH NO.	C70 PROCESSO ELAB. (A) STEELMAKING PROCESS	B04 STATO FORNITURA LAMIERA (B) DELIVERY CONDITION	C00 CAMPIONE SAMPLE	B05 TRATT. CAMPIONE (C) HEAT TREATMENT	C00 CAMPIONE PWHT SAMPLE	B05 PWHT TEMPERATURA INIZIO °C BEGINNING TEMPERATURE	B05 PWHT VELOCITA' RISCALDO C/h HEATING RATE	B05 PWHT TEMPERATURE TRATTAMENTO °C TEMPERATURE TREATMENT	B05 PWHT HOLDING TIME PERMANENZA Min	B05 PWHT VELOCITA' RAFFREDDAMENTO °C/h COOLING RATE	B05 PWHT TEMPERATURA FINE °C END TEMPERATURE	C00 N° CICLI / CYCLES	C00 CAMPIONE Q+T SAMPLE	B05 Q+T TEMPERATURA (Q) °C TEMPERATURE	B05 Q+T PERMANENZA (Q) Min HOLDING TIME	B05 Q+T RAFFREDDAMENTO COOLING	B05 Q+T TEMPERATURA (T) °C TEMPERATURE	B05 Q+T PERMANENZA (T) Min HOLDING TIME	B05 Q+T RAFFREDDAMENTO COOLING
1	6NAC680104A	1882093	40.00X3000X4650	4,38	768337	BO	N	[W3739]																
1	6NAC680702A	1881504	40.00X3000X4650	4,38	768337	BO	N	[W3739]																
1	6NAC680702B	1881504	40.00X3000X4650	4,38	768337	BO	N	[W3739]																
1	6NAC680802A	1881507	40.00X3000X4650	4,38	768337	BO	N	W3739																
1	6NAC680802B	1881507	40.00X3000X4650	4,38	768337	BO	N	W3739																
1	6NAC690501A	1881626	40.00X3000X4650	4,38	768343	BO	N	[W3743]																
1	6NAC690501B	1881626	40.00X3000X4650	4,38	768343	BO	N	[W3743]																
1	6NAC690701A	1881499	40.00X3000X4650	4,38	768343	BO	N	W3743																
1	6NAC690701B	1881499	40.00X3000X4650	4,38	768343	BO	N	W3743																
1	6NAC690702A	1881494	40.00X3000X4650	4,38	768343	BO	N	[W3743]																
1	6NAC690702B	1881494	40.00X3000X4650	4,38	768343	BO	N	[W3743]																
1	SNAB770201A	1881515	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770201B	1881515	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770202A	1881521	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770202B	1881521	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770203A	1881518	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770203B	1881518	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770301A	1881556	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770301B	1881556	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770303A	1881551	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB770303B	1881551	40.00X3000X4650	4,38	767645	BO	N	[W3737]																
1	SNAB860201A	1881527	40.00X3000X4650	4,38	768340	BO	N	W3740																
1	SNAB860201B	1881527	40.00X3000X4650	4,38	768340	BO	N	W3740																
1	SNAB860202A	1881524	40.00X3000X4650	4,38	768340	BO	N	[W3740]																

B07	B07	B07	B09/B11	B12	B07	C70	B04	C00	B05	C00	B05 PWHT								C00	B05 Q+T						
ITEM	LAMIERA PLATE	N° INFORN. INTERNAL NUMBER	DIMENSIONI [mm] DIMENSIONS	MASSA TEORICA [t] THEORICAL WEIGHT	LOTTO BATCH NO.	STEELMAKING PROCESS PROCESSO ELAB. (A)	DELIVERY CONDITION STATO FORNITURA LAMIERA (B)	CAMPIONE SAMPLE	HEAT TREATMENT TRATT. CAMPIONE (C)	CAMPIONE PWHT SAMPLE	BEGINNING TEMPERATURE TEMPERATURA INIZIO °C	HEATING RATE VELOCITA' RISCALDO C/h	TEMPERATURE TREATMENT TEMPERATURA TRATTAMENTO °C	HOLDING TIME PERMANENZA Min	COOLING RATE VELOCITA' RAFFREDDAMENTO °C/h	END TEMPERATURE TEMPERATURA FINE °C	N° CICLI / CYCLES	CAMPIONE Q+T SAMPLE	TEMPERATURE TEMPERATURA (Q) °C	HOLDING TIME PERMANENZA (Q) Min	COOLING RAFFREDDAMENTO	TEMPERATURE TEMPERATURA (T) °C	HOLDING TIME PERMANENZA (T) Min	COOLING RAFFREDDAMENTO
1	SNAB860202B	1881524	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB860203A	1881530	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB860203B	1881530	40.00X3000X4650	4,38	768340	BO	N	[W3740]																	
1	SNAB890502A	1881425	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890502B	1881425	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890503A	1881430	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB890503B	1881430	40.00X3000X4650	4,38	767637	BO	N	[W3736]																	
1	SNAB920201A	1881539	40.00X3000X4650	4,38	768341	BO	N	W3741																	
1	SNAB920201B	1881539	40.00X3000X4650	4,38	768341	BO	N	W3741																	
1	SNAB920202A	1881544	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920202B	1881544	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920203A	1881547	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAB920203B	1881547	40.00X3000X4650	4,38	768341	BO	N	[W3741]																	
1	SNAC290501A	1881412	40.00X3000X4650	4,38	767656	BO	N	W3738																	
1	SNAC290501B	1881412	40.00X3000X4650	4,38	767656	BO	N	W3738																	
1	SNAC290502A	1881416	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290502B	1881416	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290503A	1881408	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
1	SNAC290503B	1881408	40.00X3000X4650	4,38	767656	BO	N	[W3738]																	
2	6NAC680703A	1882952	60.00X3000X4750	6,71	768342	BO	N	[W3742]																	
2	6NAC680704A	1882783	60.00X3000X4750	6,71	768342	BO	N	[W3742]																	
2	6NAC690502A	1882954	60.00X3000X4750	6,71	768344	BO	N	W3744																	
	Total	46		208,47																					

C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91
COLATA HEAT	C %	Mn %	Si %	P %	S %	Cu %	Ni %	Cr %	Mo %	Al %	V %	Nb %	Ti %	Sn %	Ca %	N %	B %	H %	Ceq1 % (D)	Ceq2 % (D)	Pcm % (D)
S355NL Min 0.00 - 63.00		0,90								0,020											
S355NL Max 0.00 - 63.00	0,18	1,65	0,50	0,025	0,020	0,550	0,500	0,300	0,100		0,120	0,050	0,050			0,0150				0,43	
6NAC68	0,16	1,47	0,17	0,009	0,002	0,010	0,010	0,020	<0.005	0,043	0,001	0,026	0,001	<0.005	0,0000	0,0036	0,0002	0,0003	0,41	0,41	0,24
6NAC69	0,16	1,49	0,18	0,013	0,002	0,010	0,010	0,030	<0.005	0,037	0,001	0,024	0,001	<0.005	0,0000	0,0039	0,0002	0,0003	0,41	0,42	0,24
SNAB77	0,16	1,45	0,19	0,011	0,002	0,010	0,020	0,030	<0.005	0,038	0,001	0,025	0,001	<0.005	0,0000	0,0041	0,0001	0,0000	0,40	0,41	0,24
SNAB86	0,17	1,43	0,23	0,008	0,001	0,010	0,010	0,020	<0.005	0,030	0,001	0,028	0,002	<0.005	0,0000	0,0034	0,0001	0,0000	0,41	0,41	0,25
SNAB89	0,17	1,46	0,19	0,013	0,002	0,010	0,020	0,030	<0.005	0,039	0,001	0,026	0,002	<0.005	0,0000	0,0046	0,0001	0,0000	0,41	0,42	0,25
SNAB92	0,17	1,44	0,19	0,011	0,003	0,010	0,010	0,020	<0.005	0,028	0,001	0,027	0,001	<0.005	0,0000	0,0044	0,0004	0,0000	0,41	0,42	0,25
SNAC29	0,16	1,44	0,19	0,009	0,002	0,010	0,010	0,020	<0.005	0,040	0,001	0,024	0,001	<0.005	0,0000	0,0038	0,0001	0,0000	0,40	0,41	0,24

			PROVA DI TRAZIONE TENSILE TEST								PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12	C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	ReH [Mpa] YIELD STRENGTH	Rm [Mpa] TENSILE STRENGTH	ReH/Rm	A% ELONGATION	Rp 0.2 [Mpa] PROOF/YIELD STRENGTH	LARGHEZZA [mm] WIDTH	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDRINO [mm] MANDREL	ANGOLO [°] ANGLE	ESITO (9) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE Z% SINGOLI VALORI
ORDINE Min 1					-40								-40		50	0										
ORDINE Min 2					-60								-60		60	0										

			PROVA DI TRAZIONE TENSILE TEST									PROVA DI RESILIENZA IMPACT TEST - CHARPY V-NOTCH TEST						PROVA DI PIEGA BEND TEST				PROVA DI DUREZZA HARDNESS TEST				PROVA DI STRIZIONE Z% TEST	
C00		C01	C01	C02	C03	C11	C12		C13	C14	C10	C41	C02	C03	C01	C42	C43	C02	C51	C52	C50	C01	C30	C31	C32	C53	C54
CAMPIONE SAMPLE	SPESSORE LAMIERA PLATE THICKNESS	POSIZIONE (1) LOCATION	POSIZIONE (2) LOCATION	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	YIELD STRENGTH ReH [Mpa]	TENSILE STRENGTH Rm [Mpa]	ReH/Rm	A% ELONGATION	PROOF/YIELD STRENGTH Rp 0,2 [Mpa]	FORMA PROVINO (4) SHAPE OF TEST PIECE	LARGHEZZA [mm] WIDTH	DIREZIONE (3) ORIENTATION	TEMPERATURA [°C] TEST TEMPERATURE	POSIZIONE (2) LOCATION	SINGOLI VALORI [J] INDIVIDUAL VALUES	MEDIA [J] MEAN VALUE	DIREZIONE (3) ORIENTATION	MANDRINO [mm] MANDREL	ANGOLO [°] ANGLE	ESITO (5) RESULT	POSIZIONE (2) LOCATION	METODO TEST METHOD	SINGOLI VALORI INDIVIDUAL VALUES	MEDIA MEAN VALUE	Z% SINGOLI VALORI Z% INDIVIDUAL VALUES	Z% VALORE MEDIO Z% MEAN VALUE
S355NL Min 16.10 - 40.00					20	345	470		22,0																		
S355NL Max 16.10 - 40.00					20		630																				
S355NL Min 40.10 - 63.00					20	335	470		22,0																		
S355NL Max 40.10 - 63.00					20		630																				
S355NL Min 6.00 - 999.00													L	-50			27										
W3736	40,00	2	P	T	20	393	534	0,74	32,0		P	10,00	L	-40	D	134 186 174	165										
W3737	40,00	2	P	T	20	378	522	0,73	32,5		P	10,00	L	-40	D	235 209 196	213										
W3742	60,00	2	P	T	20	338	499	0,68	28,4		P	10,00	L	-40	D	174 102 180	152										
W3738	40,00	2	P	T	20	388	518	0,75	30,6		P	10,00	L	-40	D	206 200 194	200										
W3739	40,00	2	P	T	20	389	510	0,76	32,4		P	10,00	L	-40	D	178 194 194	189										
W3740	40,00	2	P	T	20	398	524	0,76	29,7		P	10,00	L	-40	D	198 214 196	203										
W3741	40,00	2	P	T	20	407	529	0,77	31,5		P	10,00	L	-40	D	194 193 208	198										
W3743	40,00	2	P	T	20	394	518	0,76	34,6		P	10,00	L	-40	D	206 205 168	193										
W3744	60,00	2	P	T	20	363	505	0,72	33,0		P	10,00	L	-40	D	201 189 186	192										

C10

UNI EN ISO 6892-1:2020 / UNI EN ISO 148-1:2016

D02-D50 CONTROLLO ULTRASONORO / ULTRASONIC EXAMINATION

D02		D03		D04		D05		D06		D07
APPARECCHIATURA EQUIPMENT		N° SERIE SERIAL NO		CONDIZIONI SUPERFICIALI SURFACE CONDITIONS		ACCOPPIANTE COUPLANT		MODALITÀ OPERATIVE PROCEDURE		TARATURA CALIBRATION
GILARDONI RDG2000		RDG2000-053188003		GREZZO DI LAMINAZIONE AS ROLLED		ACQUA WATER		IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION		IN ACCORDO ALLA SPECIFICA ACCORDING TO SPECIFICATION
B07	D08	D09	D10	D11	D12	D13	D14	D15	D16	D17
LAMIERA PLATE	SONDE PROBE	DIAMETRO DIAMETER MM	FREQUENZA FREQUENCE MHZ	ANGOLO Angle °	NORMA DI RIFERIMENTO STANDARD SPECIFICATION	CLASSE DI ACCETTABILITÀ ACCEPTANCE SPECIFICATIONS	ESITO RESULT	INDICAZIONI INDICATIONS	RETICOLO RETICLE	BORDI EDGES
SNAB890502A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890502B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890503A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB890503B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770301A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770301B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770303A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB770303B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290501A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290501B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290502A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290502B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290503A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC290503B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50
SNAC680104A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1		OK	NO INDICATIONS FOUND	mm 200x200	50

6NAC680702A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680702B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680802A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680802B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB860203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920201A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920201B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920202A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920202B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920203A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
SNAB920203B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC680703A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75
6NAC680704A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75
6NAC690501A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690501B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690701A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690701B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690702A	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690702B	BDD20/2	mm 20	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	50
6NAC690502A	DP25/2	mm 25	2 MHz	0	EN10160 CL. S1 E1	OK	NO INDICATIONS FOUND	mm 200x200	75

D18	D19	D20
NOTE **REMARKS**	**ENTE ISPETTIVO** **INSPECTOR**	**FIRMA** **SIGNATURE**
		METINVEST TRAMETAL S.p.a **F. Andrian** **III Liv. EN ISO 9712**

Z01

ITEM		TOLLERANZA DI SPESSORE TOLERANCE ON THICKNESS	TOLLERANZE DI LARGHEZZA TOLERANCE ON WIDTH	TOLLERANZE DI LUNGHEZZA TOLERANCE ON LENGTH	CONDIZIONI SUPERFICIALI SURFACE FINISH	PLANARITÀ FLATNESS
1		EN 10029 CL.B	EN 10029	EN 10029	EN 10163/2 CL B3	EN 10029 CL. N
2		EN 10029 CL.B	EN 10029	EN 10029	EN 10163/2 CL B3	EN 10029 CL. N

CERTIFICHIAMO che le lamiere elencate sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.
WE CERTIFY that the above mentioned plates are consistent with the order prescriptions: marking, inspection and measurement without objection.
DICHIARIAMO CHE LE LAMIERE SONO STATE CONTROLLATE IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.
WE DECLARE THAT THE PLATES WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

Z06

Z07	Z03 ENTE COLLAUDO / INSPECTION BODY	Z02
	TIMBRO DELL'ISPETTORE STAMP OF THE INSPECTION REPRESENTATIVE RINA Telesforo Erik Marine Surveyor RINA Services S.p.A. 1926	METINVEST TRAMETAL S.p.a F. Andrian CQ Manager

METINVEST
METINVEST TRAMETAL SPA

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Fax +39 010 5762990
trametal@trametal.it

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)

N.S355-3

Il sottoscritto Roberto Re, rappresentante il produttore:
METINVEST TRAMETAL SpA
Via XII Ottobre 1, 5° Piano – 16121 Genova
nello stabilimento produttivo di:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Dichiara qui di seguito che i prodotti:
Prodotti piani laminati a caldo in acciaio secondo EN10025-1:2004.

DECLARATION OF PERFORMANCE (Reg . UE N. 305/2011)

N.S355-3

I, the undersigned Roberto Re, representing the manufacturer:

METINVEST TRAMETAL SpA
Via XII Ottobre, 1 – 16121 Genova
the production site:
Via E. Fermi, 44 – 33058 San Giorgio di Nogaro (UD)
Hereby declares that the products:
Hot-rolled flat products of steel according to EN10025-1: 2004.

Qualità / Steel grade	Normativa / Specification
S355N	EN10025-3:2019
S355NL	EN10025-3:2019

Tipo prodotto / Product type	Qualità / Steel grade	Codice identificativo univoco prodotto/ Unique product identifier code	Numero interno/ Internal number	Specifica tecnica armonizzata / Harmonized techical specification
Lamiera/ Plate	S355NL	6NAC680104A	1882093	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680702A	1881504	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680702B	1881504	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680703A	1882952	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680704A	1882783	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680802A	1881507	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC680802B	1881507	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690501A	1881626	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690501B	1881626	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690502A	1882954	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690701A	1881499	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690701B	1881499	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690702A	1881494	EN10025-1:2004
Lamiera/ Plate	S355NL	6NAC690702B	1881494	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770201A	1881515	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770201B	1881515	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770202A	1881521	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770202B	1881521	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770203A	1881518	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770203B	1881518	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770301A	1881556	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770301B	1881556	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770303A	1881551	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB770303B	1881551	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860201A	1881527	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860201B	1881527	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860202A	1881524	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860202B	1881524	EN10025-1:2004

Lamiera/ Plate	S355NL	SNAB860203A	1881530	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB860203B	1881530	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890502A	1881425	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890502B	1881425	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890503A	1881430	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB890503B	1881430	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920201A	1881539	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920201B	1881539	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920202A	1881544	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920202B	1881544	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920203A	1881547	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAB920203B	1881547	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290501A	1881412	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290501B	1881412	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290502A	1881416	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290502B	1881416	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290503A	1881408	EN10025-1:2004
Lamiera/ Plate	S355NL	SNAC290503B	1881408	EN10025-1:2004

Che i prodotti specificati nel presente documento sono destinati ad essere utilizzati nelle strutture saldate, bullonate e chiodate.

The products specified in this document are intended to be used in welded structures, bolted and riveted.

Che i prodotti specificati nel presente documento presentano le seguenti caratteristiche essenziali e prestazioni:

The products specified in this document have the following essential features and performance:

Caratteristiche Essenziali / Essential features	**Prestazione / Performance**	**Norma Armonizzata / Harmonized specification**
Tolleranze dimensionali e forma /Tollerance on dimensions and shape	Conforme / Compliance	EN10025-1:2004
Allungamento /Elongation	Conforme / Compliance	EN10025-1:2004
Resistenza a Trazione/Tensile Strength	Conforme / Compliance	EN10025-1:2004
Carico Unitario snervamento/Yield Strength	Conforme / Compliance	EN10025-1:2004
Resilienza/Impact	Conforme / Compliance	EN10025-1:2004
Saldabilità/Weldability	Conforme / Compliance	EN10025-1:2004
Durabilità/Durability	NPD	
Sostanza Regolamentata/Regulated substance	NPD	

Si dichiara inoltre che l'organismo notificato, TUV SUD - Italia [N. 0948] ha effettuato:
- ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica
- sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica

secondo il sistema di valutazione e verifica della costanza della prestazione 2+ ed ha rilasciato il certificato di controllo della produzione in fabbrica numero 0948-CPR-0157 Rev.02

It also states that the notified body, TUV SUD - Italia [N. 0948], carried out:
- Initial inspection of factory and of factory production control
- Monitoring, evaluation and continuous assessment of factory production control

according to the system of assessment and verification of constancy of performance 2 + and released the certificate of factory production control number 0948-CPR-0157 Rev.02.

CE

Lamiere conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0157 Rev.02 emesso da TUV SUD - Italia in data 13/12/2019. Plates in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0157 Rev.02 from TUV SUD - Italia on 13/12/2019.

Metinvest Trametal SpA • Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V.
Registered office: Via XII Ottobre, 3 • 16121 Genova, Italy • Phone +39 010 5762911 • Fax +39 010 5762990
Works: Via E. Fermi, 44 • 33058 San Giorgio di Nogaro UD, Italy • Phone +39 0431 629989 • Fax +39 0431 629985
Cap. Soc. Euro 300.120.000,00 i.v. • C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 • REA 437720/GE
http://trametal.metinvestholding.com

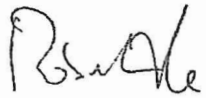
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante

This declaration of performance is made under the sole responsibility of the manufacturer

San Giorgio di Nogaro,

01/09/2023

Roberto Re



Managing Director
Metinvest Trametal spa
Metinvest Group

Metinvest Trametal SpA • Società per azioni con socio unico soggetta a direzione e coordinamento di Metinvest B.V.
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Cap. Soc. Euro 300.120.000,00 i.v. • C.F., P.IVA e Iscr. Reg. Imp. GE 05956630965 • REA 437720/GE
http://trametal.metinvestholding.com

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301682

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **20.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000445336-1723001808 123A90A-0000133821

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000445336

ordine cliente:
customer order: 1723001808 123A90A

documento di trasporto:
document of trasport DDT 0000133821

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

23

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

20/12/2023

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

#VALORE!	#VALORE!										Qtà
			Pos.OdV	Materiale	Mark	Mark2	Descrizione	Colata	DDT	Data	PZ
Cliente	1500011109		10	MSTR	159	#	HEA5003524487	44519;	133821	19.12.2023	1
	ROSETTI MARINO S.P.A.		20	MSTR	163	#	HEA5003523985	63404;	133821	19.12.2023	1
OdV	445336		30	MSTR	164	#	HEA5003521643	63404;	133821	19.12.2023	1
Riferiment	1723001808 123A90A		40	MSTR	165	#	HEA5003523983	44519;	133821	19.12.2023	1
			50	MSTR	166	#	HEA5003521487	46712;	133821	19.12.2023	1
	Quantità		60	MSTR	168	#	HEA5003521987	46712;	133821	19.12.2023	1
Comm	044	**Risultato**	70	MSTR	169	#	HEA5003521780	46712;	133821	19.12.2023	1
	CHRISTIAN CELADON		80	MSTR	170	#	HEA5003523983	64721;	133821	19.12.2023	1
			90	MSTR	207	#	HEA5003524487	64721;	133821	19.12.2023	1
			100	MSTR	214	#	HEA5003521624	63404;	133821	19.12.2023	1

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000445336
RIF. ORDINE: 1723001808 123A90A
DDT: 0000133821
PLACCA/COLATA: 44519

Mill Test Certificate NrX 4677266

Delivery note number 4677266 from 22 August 2022 A03

A08 Our reference : 1100652389
A07 Your reference : OSC2270320
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	Product (B01)	Length	Weight (B13)	Heat nr (B07)	Weight	Bund.	Bars (B08)
000003	HE 500 A	20.100 mm	5,976 to	44518	2,988 to		1
				44560	2,988 to		1
000004	HE 500 A	24.100 mm	25,074 to	44518	10,746 to		3
				44519	14,328 to		4

Heat nr (B07)	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
44518	0,06	0,69	0,016	0,021	0,19	0,011	0,004	0,24	0,14	0,10	0,035	0,002	0,040	0,001	0,0003	0,24
44519	0,07	0,70	0,017	0,024	0,18	0,012	0,004	0,30	0,19	0,15	0,034	0,002	0,040	0,001	0,0002	0,26
44560	0,06	0,70	0,027	0,019	0,16	0,012	0,004	0,31	0,13	0,11	0,033	0,002	0,060	0,001	0,0002	0,25

Heat nr (B07)	Tensile test N/mm2 ReH (C11)	N/mm2 Rm (C12)	5,65VS A(%) (C13)	Charpy impact test C40 KV UNAGED J Position (C01)	mm (C02)	(C41)	°C (C03)	1 (C42)	2	3	M (C43)
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
44518	447	534	24,29	FL.1/3	L		-20	158	154	89	134
44519	447	526	24,50	FL.1/3	L		-20	75	154	122	117
44560	445	538	25,00	FL.1/3	L		-20	135	70	150	118

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4677266
Delivery note number 4677266 from 22 August 2022 A03

A08 Our reference : 1100652389
A07 Your reference : OSC2270320
15.07.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A08 Our reference : 1100674160

A07 Your reference : OSC2370281
29.05.2023
MANNI SIPRE S.P.A.

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000445336
RIF. ORDINE: 1723001808 123A90A
DDT: 0000133821
PLACCA/COLATA: 63404

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

Mill Test Certificate NrX 4879675

Delivery note number 4879675 from 12 June 2023 A03

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 500 A	20.100 mm	15,165 to	63403	6,066 to		2
				63404	9,099 to		3

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
63403	0,06	0,89	0,022	0,024	0,17	0,009	0,002	0,34	0,15	0,10	0,031	0,007	0,040	0,001	0,0004	0,28
63404	0,07	0,88	0,023	0,029	0,17	0,009	0,002	0,32	0,15	0,11	0,032	0,007	0,040	0,001	0,0004	0,28

Heat nr	Tensile test N/mm2 ReH C11	N/mm2 Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	UNAGED °C C03	J 1 C42	2	3	M C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
63403	460	548	25,64	FL.1/3	L		-20	150	144	154	149
63404	432	515	26,86	FL.1/3	L		-20	135	150	155	147

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4879675

Delivery note number 4879675 from 12 June 2023 A03

A08 Our reference : 1100674160

A07 Your reference : OSC2370281
29.05.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000445336
RIF. ORDINE: 1723001808 123A90A
DDT: 0000133821
PLACCA/COLATA: 46712

Mill Test Certificate NrX 4746457

Delivery note number 4746457 from 29 November 2022 A03

A08 Our reference : 1100659598
A07 Your reference : OSC2280428
08.11.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000008	HE 500 A	20.100 mm	9,207 to	46711	9,207 to		3
000009	HE 500 A	24.100 mm	11,040 to	46712	11,040 to		3

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					0,14											
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
46711	0,06	0,70	0,019	0,021	0,19	0,010	0,004	0,29	0,14	0,09	0,033	0,002	0,030	0,001	0,0007	0,24
46712	0,06	0,71	0,018	0,023	0,19	0,010	0,004	0,31	0,14	0,11	0,037	0,002	0,030	0,001	0,0007	0,24

Heat nr	Tensile test			Charpy impact test							
	N/mm2	N/mm2	5,65VS	C40 KV		UNAGED		J		
	ReH	Rm	A(%)	Position	mm	°C	1	2	3	M
B07	C11	C12	C13	C01	C02	C41	C03	C42			C43
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
46711	448	541	25,28	FL.1/3	L		-20	92	89	150	110
46712	452	539	26,89	FL.1/3	L		-20	158	125	162	148
46712	449	538	26,02								

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4746457
Delivery note number 4746457 from 29 November 2022 A03

A08 Our reference : 1100659598
A07 Your reference : OSC2280428
08.11.2022
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000445336
RIF. ORDINE: 1723001808 123A90A
DDT: 0000133821
PLACCA/COLATA: 64721

Mill Test Certificate Nr X 4943183

Delivery note number 4943183 from 13 September 2023 A03

A08 Our reference : 1100676677
A07 Your reference : OSC2370337
27.06.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	Product (B01)	Length	Weight (B13)	Heat nr (B07)	Weight	Bund.	Bars (B08)
000004	HE 500 A	24.100 mm	18,470 to	64721	18,470 to		5

Heat nr (B07)	Heat analysis (%)																
	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
64721	0,06	0,87	0,023	0,024	0,17	0,008	0,003	0,29	0,17	0,13	0,034	0,008	0,040	0,001	0,0004	0,28	0,024

Heat nr (B07)	Tensile test			Charpy impact test							
	N/mm2 ReH (C11)	N/mm2 Rm (C12)	5,65VS A(%) (C13)	C40 KV Position (C01)	(C02)	mm (C41)	UNAGED °C (C03)	J 1 (C42)	2	3	M (C43)
Min	345	470	22,00	FL.1/3	L		-20	19			27
Max		630									
64721	454	533	26,60	FL.1/3	L		-20	154	120	93	122

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 4943183

Delivery note number 4943183 from 13 September 2023 A03

A08 Our reference : 1100676677
A07 Your reference : OSC2370337
27.06.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301755

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **25.01.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000448364-1723001808 129A90A-0000101804

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000448364

ordine cliente:
customer order: 1723001808 129A90A

documento di trasporto:
document of trasport DDT 0000101804

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

25/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

#VALORE!	#VALORE!

Cliente	1500011109	
	ROSETTI MARINO S.P.A.	
OdV	448364	
Riferiment	1723001808 129A90A	
	Quantità	
Comm	044	**Risultato**
	CHRISTIAN CELADON	

								Qtà
Pos.OdV	**Materiale**	**Mark**	**Mark2**	**Descrizione**	**Colata**	**DDT**	**Data**	PZ
10	MSTR	219	#	HEA3403521272	72410;	101804	24.01.2024	2
20	MSTR	266	#	HEA3403521412	72410;	101804	24.01.2024	2
30	MSTR	267	#	HEA3403521412	70494;	101804	24.01.2024	1
40	MSTR	235	#	IPE3303521412	223182;	101804	24.01.2024	1
50	MSTR	240	#	IPE3303521710	223182;	101804	24.01.2024	1
60	MSTR	242	#	IPE3303521715	223182;	101804	24.01.2024	2
70	MSTR	243	#	IPE3303521491	141202A;	101804	24.01.2024	4
80	MSTR	246	#	IPE3303521792	223182;	101804	24.01.2024	1
90	MSTR	247	#	IPE3303521360	223182;	101804	24.01.2024	1
100	MSTR	248	#	IPE3303521127	225536;	101804	24.01.2024	2
110	MSTR	249	#	IPE3303521631	141202A;	101804	24.01.2024	2
120	MSTR	250	#	IPE3303521292	223182;	101804	24.01.2024	2
130	MSTR	262	#	IPE3303521710	141202A;	101804	24.01.2024	3
					225536;	101804	24.01.2024	4
140	MSTR	264	#	IPE3303521573	141202A;	101804	24.01.2024	2
					223182;	101804	24.01.2024	1
150	MSTR	271	#	IPE3303521127	225536;	101804	24.01.2024	2
160	MSTR	272	#	IPE3303521360	223182;	101804	24.01.2024	1
170	MSTR	328	#	IPE3303521710	141202A;	101804	24.01.2024	2
180	MSTR	279	#	IPE2403521491	CE248333;	101804	24.01.2024	2
190	MSTR	280	#	IPE2403521486	69401;	101804	24.01.2024	1
200	MSTR	281	#	IPE2403521792	69401;	101804	24.01.2024	1
210	MSTR	292	#	IPE240352989	69401;	101804	24.01.2024	2
220	MSTR	293	#	IPE240352992	69401;	101804	24.01.2024	1
230	MSTR	294	#	IPE240352994	69401;	101804	24.01.2024	1
240	MSTR	295	#	IPE240352988	69401;	101804	24.01.2024	1
250	MSTR	296	#	IPE240352989	69401;	101804	24.01.2024	1

260	MSTR	340	#	IPE2403521492	69401;	101804	24.01.2024	1
270	MSTR	342	#	IPE2403521486	69401;	101804	24.01.2024	1
280	MSTR	361	#	IPE2403521487	CE248333;	101804	24.01.2024	1
290	MSTR	362	#	IPE2403521491	69401;	101804	24.01.2024	1

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 72410

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

3043/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\ \sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3044/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
6	72410	HE 340A	EN 10365	20.100 mm	3	6.325 kg
6	72411	HE 340A	EN 10365	20.100 mm	2	4.220 kg
7	72410	HE 340A	EN 10365	24.100 mm	4	10.080 kg
9	72452	HE 400A	EN 10365	24.100 mm	2	5.980 kg
9	72453	HE 400A	EN 10365	24.100 mm	2	5.975 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72410	0,09	0,18	1,45	0,025	0,019	0,008	0,011	0,039	0,008	0,11
72411	0,09	0,20	1,45	0,020	0,019	0,008	0,015	0,040	0,009	0,11
72452	0,08	0,20	1,44	0,019	0,021	0,009	0,015	0,040	0,008	0,09
72453	0,09	0,20	1,43	0,018	0,017	0,009	0,015	0,040	0,009	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72410	0,34	0,15	0,03	0,023	0,39
72411	0,29	0,12	0,03	0,025	0,39
72452	0,21	0,13	0,03	0,023	0,37
72453	0,21	0,14	0,03	0,022	0,38

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72410	409	541	32,0	
72411	413	541	31,0	
72452	405	502	34,0	
72453	397	503	34,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72410	KV 450	L	-20 °C	19 / 27	89	124	92	101
72411	KV 450	L	-20 °C	19 / 27	115	120	61	98
72452	KV 450	L	-20 °C	19 / 27	156	171	178	168
72453	KV 450	L	-20 °C	19 / 27	161	160	164	161

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

032 CPD 462031022 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028081
A07 Your Order No.: OSC2370431

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2515/9-2023**
Advice No. 800155788

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 15.09.2023

Z04

CE

0769
23

032 CPR 0220-1021 SWT

3047/3402

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 70494

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i.A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3049/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2357/6-2023
Advice No. 800150471

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
10	70494	HE 340A	EN 10365	24.100 mm	6	15.150 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
70494	0,10	0,18	1,44	0,021	0,021	0,008	0,016	0,039	0,008	0,13

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
70494	0,27	0,12	0,03	0,021	0,40

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
70494	429	543	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
70494	KV 450	L	-20 °C	19 / 27	75	51	64	63

Z03 Works inspector
René Merbach

Z02 26.06.2023

Z04

CE

0769
23

032 CER 20231021 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026879
A07 Your Order No.: OSC2370269

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2357/6-2023**
Advice No. 800150471

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 26.06.2023

Z04

CE

0769
23

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 223182

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099
AMOL-2/09-CPR-13-1
EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1791800

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-85426	**28/6/23**	**OSC2370341**	**27/6/23**	**31/8/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19769182356304	**IPE 330**	**18,1 m.**	**4**	**223182**	**3.413**

1 paquetes **4 barras** **3.413 Kg**

TRANSPORTISTA
TTES ORTAGUI ZONA PORTUARIA DE LEZO PASAI ANTXO GIPUZKOA N.I.F. A20070918

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.980	**38.160**	**3.413**

VEHICULO / REMOLQUE	POR EXPEDICIONES
1690KNM / R0794BBM **JOSE MARIA PAJARES MOLANO** **D.N.I. 44129388R**	Alvaro Lopez 10:59 12:10

Olaberría, jueves, 31 de agosto de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753114

09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1791800

ALMACÉN DE CARGA / CERTIFICADO POR
ARCELORMITTAL OLABERRIA CARRETERA MADRID - IRUN, KM. 417 20212 OLABERRIA (Gipuzkoa) TELEF. (943) 80.50.00 - FAX (943) 88.04.04

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-85426	**28/6/23**	**OSC2370341**	**27/6/23**	**31/8/23**

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1791800

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	223182	,07	,93	,22	,024	,018	,008	,003	,100	,350	,160	,024	,027						,29

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	223182	374	478	35,6		-20º	7,5	155	157	161	158

1 / 1 análisis

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Responsable del Departamento de Calidad Z01

Jose Maria Galindo

TRANSPORTISTA
TTES ORTAGUI ZONA PORTUARIA DE LEZO PASAI ANTXO GIPUZKOA N.I.F. A20070918

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.980	**38.160**	**3.413**

VEHICULO / REMOLQUE	POR EXPEDICIONES
1690KNM / R0794BBM **JOSE MARIA PAJARES MOLANO** **D.N.I. 44129388R**	Alvaro Lopez 10:59 12:10

Olaberría, jueves, 31 de agosto de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753114 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1791800

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-85426	**28/6/23**	**OSC2370341**	**27/6/23**	**31/8/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 1 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
fabio.scapinello@mannigroup.com
COVER MATERIAL

Ref: 1100676898

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

TTES ORTAGUI
ZONA PORTUARIA DE LEZO
PASAI ANTXO
GIPUZKOA
N.I.F. A20070918

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.980	**38.160**	**3.413**

VEHICULO / REMOLQUE	POR EXPEDICIONES
1690KNM / R0794BBM	Alvaro Lopez 10:59
JOSE MARIA PAJARES MOLANO	12:10
D.N.I. 44129388R	

Olaberría, jueves, 31 de agosto de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

3056/ 3402

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.

STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1446 2023 **del** 6/10/23

Pag. 1

Your Ref.: OSC2370427 / 2/08/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448364
RIF. ORDINE: 17230018O8 129A90A
DDT: 0000101804
PLACCA/COLATA: 141202A

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/1446

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*		B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
Norma del prodotto / *Standard product*			Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
B07 Colata - Lotto / *Heat - Item*		A07	Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* h (mm)	C41 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
	(*)													
HEA 500		S355J2 +AR		1	20,10	0,14	1,24	0,21	0,015	0,0070	0,024	0,418	0,010	0,424
EN 10365		EN 10025-2/EN10034		2	6.211	0,114	0,170	0,040	0,002	0,002	0,025	0,018	0,0001	
No. 141507B	G	OSC2370427			43/001459	357	523	32	10,0	118,0	116,0	131,0	121,7	- 20
IPE 330		S355J2 +AR		3	20,10	0,15	1,31	0,18	0,020	0,0060	0,023	0,413	0,011	0,445
EN 10365		EN 10025-2/EN10034		18	17.709	0,144	0,141	0,024	0,003	0,002	0,024	0,018	0,0004	
No. 141202A	G	OSC2370427			43/001459	382	537	32	7,5	134,0	123,0	128,0	128,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

3057/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GU/1446

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	Prestazione *Performance*				Norma armonizzata *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

03 N° 2023 DDT / GU/1446

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GU/1446**

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1422 2023 **del** 3/10/23

Pag. 1

Your Ref.: OSC2370411 / 25/07/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 141202A

000992

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE GU/1422

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C

	(*)														
HEB 280		S355J2 +AR	3	18,10	0,15	1,29	0,25	0,028	0,0050	0,024	0,432	0,010	0,453
EN 10365		EN 10025-2/EN10034	6	10.994	0,156	0,206	0,044	0,004	0,004	0,025	0,018	0,0004	
No. 141190A	G	OSC2370411		43/001401	371	540	31	10,0	121,0	107,0	111,0	113,0	- 20
IPE 330		S355J2 +AR	3	18,10	0,15	1,31	0,18	0,020	0,0060	0,023	0,413	0,011	0,445
EN 10365		EN 10025-2/EN10034	18	15.726	0,144	0,141	0,024	0,003	0,002	0,024	0,018	0,0004	
No. 141202A	G	OSC2370411		43/001401	382	537	32	7,5	134,0	123,0	128,0	128,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

3060/ 3402

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GU/1422

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	Prestazione *Performance*				Norma armonizzata *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	S355JR/J0/J2/K2	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

03 N° 2023 DDT / GU/1422

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GU/1422**

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 225536

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871339838	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340029	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340232	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.455**
19768871340247	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340525	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871339364	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.454**
19768871339511	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.455**

7 paquetes **28 barras** **24.180 Kg**

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR ACERO ESTRUCTURAL 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1818651

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225533	,08	1,01	,20	,023	,024	,010	,003	,140	,450	,220	,034	,028						,33
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225533	403	504	34,1		-20º	7,5	107	121	36	88
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

2 / 2 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
MARTIN RODRIGUEZ O NORBERTO ALMANDOZ 5-1º B 20100 ERRENTERIA GIPUZKOA N.I.F. 34095204G

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.
ArcelorMittal Europe – Long Products
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04
ESB20435301

ArcelorMittal

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCKS PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
spedizioni.crema@mannigroup.com
marianna.rigamonti@mannigroup.com
COVER MATERIAL

Ref: 1100685201

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ	Alvaro Lopez 7:24
OSCAR MARTIN RODRIGUEZ	8:51
D.N.I. 34095204G	

Olaberría, viernes, 15 de diciembre de 2023

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP™ CELSA BARCELONA

Sostenibilidad Siderúrgica Gestión RSE SGSS – 001/2010

CE 0099 06 CELSA01BCN

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: CE248333

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04042442
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNISIPRE SPA (DIV. 7)
Via I Maggio DIV. 7
37060 MOZZECANE
Italy

Document n°: 202277271
Order number : 10837020
Your order : OSC2370644

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Cu %	Mo %	V %	W %	AL %	N %	Ti %	CEV %	Yield Str. MPA	Ten-sile Str. MPA	Elong. L0= 5,65VSo %
S 355 J2 +M IPE240 L.15.1M	CE248333	0,090	1,110	0,160	0,020	0,030	0,220	0,120	0,450	0,020	0,032	0,006	0,001	0,0117	0,001	0,367	384	529	28,0
S 355 J2 +M IPE240 L.15.1M	CE248381	0,090	1,120	0,150	0,023	0,028	0,110	0,140	0,420	0,021	0,030	0,007	0,001	0,0118	0,001	0,346	393	527	29,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Hot rolled products of structural steels.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,01.12.2023
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS - 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04042442
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNISIPRE SPA (DIV. 7)
Via I Maggio DIV. 7
37060 MOZZECANE
Italy

Document n°: 202277271
Order number : 10837020
Your order : OSC2370644

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE240 L.15.1M	CE248333	83	53	59	65	-20
S 355 J2 +M IPE240 L.15.1M	CE248381	102	72	78	84	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,01.12.2023
Juan Diego Martínez Gálvez
Quality Control Manager

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: / DATE OF LOADING: 01.12.2023

Nº ALBARÁN: / DELIVERY NOTE NUMBER: PE4 202277271

Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:

MANNISIPRE SPA (DIV. 7) Tel:(39)045 6339535
Via I Maggio DIV. 7
37060 MOZZECANE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: 203168902

HARTL CARRIER SRL
BUL.GEN.TOTLEBEN, BL./Nº: 53-55
STOLICHNA
BULGARIA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10837020				Su pedido: OSC2370644			
	9402441489	BETM-240X15.1	12	S 355 J2 + M IPE240 L.15.1 M		CE248333	5.453 KG
	9402441521	BETM-240X15.1	3	S 355 J2 + M IPE240 L.15.1 M		CE248381	1.348 KG
	9402441520	BETM-240X15.1	12	S 355 J2 + M IPE240 L.15.1 M		CE248381	5.383 KG
10837589				Su pedido: OSC2370653			
	9451358864	BE05-600X15.1	3	S 275 J0 + AR IPE600 L. 15,1M		CE248531	5.403 KG
	9451358863	BE05-600X15.1	3	S 275 J0 + AR IPE600 L. 15,1M		CE248532	5.413 KG
TOTAL			33				23.000 KG

■ Cita Cliente: Imprescindible confirmar

Lunes-Jueves: 07:00-13:00 Viernes: 07:00-13:00

CONTACTO / CONTACT:
fabio.scapinello@mannigroup.com
Fabio Scapinello
(39)045 6339400

Nº TRANSPORTE: 6001404576 / 840929

TRANSPORTISTA / CARRIER: Hartl Connect Transport GmbH
Fiecht Au 17
6130 A-6130 VOMP, AUSTRIA
AUSTRIA

MATRÍCULA / VEHICLE REG. NUMBER: TM17XJW / TM17PFX

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
01	12	2023	060239558	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000448364
RIF. ORDINE: 1723001808 129A90A
DDT: 0000101804
PLACCA/COLATA: 69401

Mill Test Certificate Nr X 4992491

Delivery note number 4992491 from 23 November 2023 A03

A08 Our reference : 1100685584
A07 Your reference : OSC2370597
30.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	IPE 240	18.100 mm	9,824 to	69401	9,824 to		18

Heat nr B07		Heat analysis (%)															
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					0,14												0,020
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,110			0,45	100,0
69401		0,09	1,14	0,023	0,018	0,16	0,009	0,002	0,38	0,14	0,09	0,005	0,033	0,030	0,021	0,0003	0,34	0,026

Heat nr		Tensile test			Charpy impact test							
		N/mm2	N/mm2	5,65VS	C40 KV		UNAGED			J		
		ReH	Rm	A(%)	Position	mm	°C	1	2	3	M	
B07		C11	C12	C13	C01	C02	C41	C03	C42			C43
	Min	355	470	22,00	FL.1/3	L		-20		14		20
	Max		630									
69401		435	537	29,34	FL.1/3	L	7,5	-20	128	131	132	130

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

3071/3402

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4992491

Delivery note number 4992491 from 23 November 2023 A03

A08 Our reference : 1100685584

A07 Your reference : OSC2370597
30.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301720

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

10.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000446017-1723001808 123A90A-0000400076

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000446017
production code

ordine cliente: — 1723001808 123A90A
customer order:

documento di trasporto: — DDT 0000400076
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

10/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000446017
RIF. ORDINE: 1723001808 123A90A
DDT: 0000400076
PLACCA/COLATA: 68668

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3077/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026248
A07 Your Order No.: OSC2370170

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 1732/4-2023
Advice No. 800145503

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
8	68683	HE 320A	EN 10365	18.100 mm	3	5.270 kg
9	68668	HE 340A	EN 10365	20.100 mm	3	6.300 kg
10	68668	HE 340A	EN 10365	24.100 mm	6	15.040 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
68668	0,09	0,19	1,49	0,020	0,020	0,010	0,014	0,042	0,009	0,07
68683	0,08	0,18	1,44	0,016	0,020	0,011	0,015	0,040	0,009	0,09

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
68668	0,24	0,10	0,02	0,023	0,38
68683	0,31	0,16	0,04	0,024	0,38

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
68668	401	525	30,0	
68683	417	525	32,0	

*Yield stress <16mm/<40mm

Z03 Works inspector
René Merbach

Z02 24.04.2023

Z04 CE 0769

3078/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20026248
A07 Your Order No.: OSC2370170

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1732/4-2023**
Advice No. 800145503

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
68668	KV 450	L	-20 °C	19 / 27	78	114	80	90
68683	KV 450	L	-20 °C	19 / 27	153	156	164	157

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 24.04.2023

Z04

CE

0769

3079/ 34023

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1723001808	123A90A	Q012301757

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

25.01.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000446040-1723001808 123A90A.-0000400482

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000446040

ordine cliente:
customer order: 1723001808 123A90A.

documento di trasporto:
document of trasport DDT 0000400482

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
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Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

25/01/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
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F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
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Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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26013 Crema (CR) | ITALY | Via Gaeta, 23
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80613510

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80613510
DDT	400482
OdV	446040
Riferimento Cliente	1723001808 123A90A.
	Quantità in UMB (NO BDG)
	PZ
	13

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	10	161	#	HEA3403523985	72410;	3
900002	20	162	#	HEA3403523982	72410;	5
900003	20	162	#	HEA3403523982	72410;	2
900004	40	167	#	HEA3403522988	59797;	1
900005	40	167	#	HEA3403522988	132332A;	1
900006	70	182	#	HEA3403523972	72410;	1

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000446040
RIF. ORDINE: 1723001808 123A90A.
DDT: 0000400482
PLACCA/COLATA: 72410

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

3084/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30	C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11	
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3085/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027490
A07 Your Order No.: OSC2380284

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2198/9-2023
Advice No. 800155742

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	72410	HE 340A	EN 10365	20.100 mm	5	10.535 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72410	0,09	0,18	1,45	0,025	0,019	0,008	0,011	0,039	0,008	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72410	0,34	0,15	0,03	0,023	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72410	409	541	32,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72410	KV 450	L	-20 °C	19 / 27	89	124	92	101

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027490
A07 Your Order No.: OSC2380284

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2198/9-2023**
Advice No. 800155742

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
23

CSN
Companhia Siderúrgica Nacional

SWT THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000446040
RIF. ORDINE: 1723001808 123A90A.
DDT: 0000400482
PLACCA/COLATA: 59797

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. U. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3089/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20021147
A07 Your Order No.: OSC2280212

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1047/6-2022**
Advice No. 800109114

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
8	59808	HE 320A	EN 10365	20.100 mm	6	11.795 kg
9	59795	HE 340A	EN 10365	18.100 mm	3	5.770 kg
10	59797	HE 340A	EN 10365	20.100 mm	2	4.210 kg
10	59798	HE 340A	EN 10365	20.100 mm	1	2.100 kg
15	59828	HE 280B	EN 10365	20.100 mm	3	6.230 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
59795	0,08	0,18	1,41	0,025	0,021	0,009	0,013	0,040	0,007	0,10
59797	0,08	0,18	1,48	0,018	0,018	0,010	0,013	0,040	0,007	0,08
59798	0,08	0,20	1,47	0,018	0,019	0,011	0,016	0,038	0,007	0,08
59808	0,08	0,18	1,41	0,023	0,023	0,010	0,015	0,039	0,007	0,09
59828	0,09	0,19	1,42	0,020	0,017	0,010	0,013	0,040	0,007	0,09

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
59795	0,30	0,13	0,03	0,022	0,37
59797	0,27	0,11	0,02	0,023	0,37
59798	0,29	0,13	0,02	0,023	0,37
59808	0,29	0,14	0,03	0,021	0,37
59828	0,30	0,16	0,03	0,022	0,38

*C <16mm/<40mm *CEV <16mm/<40mm

Z03 Works inspector
René Merbach

Z02 10.06.2022

Z04

CE

0769
22

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20021147
A07 Your Order No.: OSC2280212

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1047/6-2022**
Advice No. 800109114

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355/345*	470	22,0	
59795	395	523	30,0	
59797	400	516	31,0	
59798	420	513	32,0	
59808	418	517	32,0	
59828	406	506	33,0	

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
59795	KV 450	L	-20 °C	19 / 27	86	92	111	96
59797	KV 450	L	-20 °C	19 / 27	85	67	147	99
59798	KV 450	L	-20 °C	19 / 27	150	133	126	136
59808	KV 450	L	-20 °C	19 / 27	115	119	67	100
59828	KV 450	L	-20 °C	19 / 27	133	162	144	146

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:

Z03 Works inspector
René Merbach

Z02 10.06.2022

Z04

CE

0769
22

032 CPR 2020-10-01 SWT
3091/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20021147
A07 Your Order No.: OSC2280212

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 Certificate No. 1047/6-2022
Advice No. 800109114

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 10.06.2022

Z04

CE

0769
22

032 CPR 2020-10-01 SWT

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 1098 2022 **del** 11/05/22

Pag. 1

Your Ref.: OSC2280063 / 15/02/22

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA
VIA A.RIGHI 7
37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000446040
RIF. ORDINE: 1723001808 123A90A.
DDT: 0000400482
PLACCA/COLATA: 132332A

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GU/1098

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*	C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEA 340		S275J0 +AR	1	20,10	0,13	0,67	0,21	0,009	0,0220	0,007	0,020	0,008	0,250
EN 10365		EN10025-2/EN10034	2	4.169	0,050	0,010	0,001	0,002		0,020			
No. A39964A	G	OSC2280063		42/000363	277	425	34	10,0	168,0	196,0	176,0	180,0	0
HEA 450		S275J0 +AR	1	20,10	0,14	0,52	0,23	0,018	0,0060	0,006	0,467	0,012	0,310
EN 10365		EN10025-2/EN10034	2	5.557	0,163	0,186	0,036	0,001		0,021			
No. 132634A	G	OSC2280051		42/000314	338	488	30	10,0	130,0	116,0	118,0	121,3	0
HEA 450		S275J0 +AR	1	20,10	0,14	0,51	0,20	0,019	0,0070	0,005	0,470	0,012	0,308
EN 10365		EN10025-2/EN10034	2	5.557	0,150	0,205	0,038	0,001		0,021			
No. 132635A	G	OSC2280051		42/000314	329	481	30	10,0	114,0	139,0	127,0	126,7	0
HEB 450		S275J0 +AR	1	20,10	0,15	0,53	0,21	0,014	0,0090	0,005	0,407	0,010	0,307
EN 10365		EN10025-2/EN10034	2	6.789	0,083	0,174	0,040	0,002		0,024			
No. 130931A	G	OSC2280051		42/000314	331	473	33	10,0	121,0	125,0	132,0	126,0	0
HEA 340		S355J2 +AR	1	20,10	0,14	1,26	0,19	0,024	0,0080	0,025	0,478	0,010	0,436
EN 10365		EN 10025-2/EN10034	2	4.168	0,164	0,157	0,036	0,003	0,002	0,024	0,023	0,0001	
No. 132332A	G	OSC2280052		42/000317	359	528	30	10,0	173,0	147,0	154,0	158,0	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
G Duferco TRAVI E PROFILATI

Quality Manager
Daniele Lombardo

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2022 DDT / GU/1098

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*
Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, 19/01/21

02 N° 2022 DDT / GU/1098

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2022 **GU/1098**

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2022 DDT / GU/1098

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 qualità: JR, J0, J2, K2
   Grade, quality: hot rolled product in agreement with EN10025-2:2004.
   Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
   Zona Industriale Giammoro
   98042 Pace del Mela (ME), Italia
   Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of assessment and verification of constancy of performance of the construction product:

   2+

6a. Norma armonizzata: EN 10025-1:2004
   Harmonized standard: EN 10025-1:2004
   Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
   Notified body that issued the certificate of conformity of the factory production control:

   N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*		**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.	EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.	
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.	
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.	
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.	
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.	
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.	
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.	

Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)		
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335

Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)
		≥ 3 ÷ ≤ 100
	S355JR/J0/J2/K2	470 ÷ 630

Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)	
		≥ 3 ÷ ≤ 40	> 40 ÷ ≤ 63
	S355JR/J0/J2	≥ 22	≥ 21
	S355K2	≥ 20	≥ 19

Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150	
		Temperatura /*Temperature* (°C)	KV min
	S355JR	20	27
	S355J0	0	27
	S355J2	- 20	27
	S355K2	- 20	40

Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)		
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150
	S355JR/J0/J2/K2	0,46	0,48	

Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**

03 N° 2022 DDT / GU/1098

Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2022 **GU/1098**

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	**1723002024**	**123A90A**	**Q012301681**

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

20.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7920 del 19/12/2023__P3312D__1953052

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-015	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1963040 1953052	730316226 730324440	000015 000015	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo — Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability — Steel Expressed as indicated in the DoP

FRANCHINI LAMIERE DDT Nr. 7920 del 19/12/2023 __P3312D__1953052

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0295845 — Page 1 / FIN

A02 — A09/A03

ArcelorMittal
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13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: **FOS**

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/IND 27 J MINI/MOY

(5)

CDC : Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalization rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
A : Adouci par recuit / Soft annealing

(1)

B03

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-015 A07	GH3I012011 000015 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	(1) LTC : LN B04 Traitement de référence / Treatment of test samples (1) BL B05

Identification du produit / Product identification		Poste / Item	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight (kg) (7)	Emplacement / Location (2)	Traction / Tensile requirements										Résilience / Impact testing								
Repère pièce / Plate number	Coulée / Heat			Epaisseur / Thickness	Largeur / Width	Longueur / Length			S (3)	Pos. Z(4)	Type	Réf / Ref (5)	Temp.	ReEH	Rm	A%				Emplacement / Location (2)	Réf / Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C06	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-	-C42-	->	C43
1957053	730316226	001		8,000	2000,00			1	T	P	PRISM	BL	20	488	592	23,3				1	BL	KV	L	-20	P	127	147	138	137
1953040	730316226	001	1	8,000	2000,00		24596																						
1953052	730324440	001	1	8,000	2000,00		25669	1	T	P	PRISM	BL	20	479	576	26,2				1	BL	KV	L	-20	P	125	121	135	127

NB. N. MASTROLIA
1 P3335
2 P3312

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CEN02=SI+2,5P =0,050 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	Al%	B %	Cr%	Cu%	Mo%	N %	Nb%	Ni%	Ti%	V %				CEQ02	CEN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C95	C97	
O/YCC		730316226	0,180	1,465	0,016	0,007	0,015	0,044	0,0001	0,023	0,023	0,004	0,0036	0,014	0,019	0,017	0,001				0,43	0,055					
O/YCC		730324440	0,180	1,462	0,016	0,006	0,012	0,039	0,0001	0,045	0,018	0,011	0,0031	0,014	0,017	0,015	0,003				0,44	0,052					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C52

(6) Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 26/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

269

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0294762 — Page 1 / FIN — A02 — A09/A03

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's Identification: **FOS**

(5) T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/2ND 27 J MINI/MOY
B03

CDC: Conforme cahier charges / According specifications
RL : Reçu de Laminage / As rolled
NN : Laminage normalisant / Normalization rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
M : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition (1)
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-014 A07	GH3I012011 000014 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04

Traitement de référence / Treatment of test samples (1): BL — B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements										Emplacement	Résilience / Impact testing						
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<--	C42	-->	C43
1957051	730316224	001	1	8,000	2000,00		25079	1	T	P	PRISM	BL	20	477	589	27,7				1	BL	KV	L	- 20	P	140	148	131	140
1957052	730316224	001	1	8,000	2000,00		26226																					

NS. N. MATRICOLA
1 P3118
2 P3127

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CEN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																						
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CEN02				%
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97
O/YCC		730316224	0,185	1,471	0,016	0,006	0,018	0,032	0,0001	0,033	0,019	0,006	0,0039	0,013	0,014	0,015	0,002				0,44	0,057				

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(6)Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 20/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

263

FRANCHINI LAMIERE DDT Nr. 7920 del 19/12/2023__P3127D__1957052

FRANCHINI LAMIERE DDT Nr. 7920 del 19/12/2023__P3127D__1957052

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-014	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957051 1957052	730316224 730316224	000014 000014	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301651

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani **07.12.2023**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7673 del 7/12/2023__P3081D__1957054

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02 — N° 730/0294308 — Page 1 / FIN — A09/A03

ArcelorMittal
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E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/MD 27 J MINI/MOY

(5) CPC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalization rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
G : Adouci par recuit / Soft annealing
B03 (1)

Organisme et/ou service de contrôle Inspection organism	Client et/ou destinataire Customer and/or consignee	N° Commande Courtier/Client Customer's Order Nbr	N° Commande Usine Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison Delivery condition
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-015 A07	GH3I012011 000015 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN (1) B04 Traitement de référence / Treatment of test samples: BL (1) B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements											Emplacement	Résilience / Impact testing								
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos. Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%					Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C06	C10		C03	C11	C12	C13	<-C14-C29		C90-C99->		C01		C40	C02	C08	C62	<-	-C42-	->	C43
1957053	730316226	001	1	8,000	2000,00		26129	1	T	P	PRISM	BL	20	488	592	23,3					1	BL	KV	L	-20	P	127	147	136	137
1957054	730316226	001	1	8,000	2000,00		26236																							
1957055	730316226	001	1	8,000	2000,00		26296																							
1957050	730324441	001	1	8,000	2000,00		23539	1	T	P	PRISM	BL	20	496	602	23,3					1	BL	KV	L	-20	P	124	150	148	141

NS. N. MATRICOLA
1 P 3041
2 P 3081

NS. N. MATRICOLA
3 P 3063
4 P 3075

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,05 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CEN02=SI+2,5P =0,090 MAXI

Meth. (8) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CEN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730316226	0,180	1,465	0,016	0,007	0,015	0,044	0,0001	0,023	0,023	0,004	0,0036	0,014	0,019	0,017	0,001				0,43	0,055					
O/YCC		730324441	0,178	1,522	0,015	0,005	0,014	0,036	0,0001	0,040	0,016	0,011	0,0031	0,014	0,017	0,015	0,004				0,45	0,051					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length. C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix. C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix. C62
(6) Mode élab.Meth.Coulée: T: Thomas Mc Martin; E: Electrique / Electric; OY: Oxy.pur / Basic oxyg.; CC: Coulée Continue / Continuous casting. C70/93
(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 19/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

262

FRANCHINI LAMIERE DDT Nr. 7673 del 7/12/2023__P3081D__1957054

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-015	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot-rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957053	730316226	000015	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
1957055	730316226	000015		
1957050	730324441	000015		
1957054	730316226	000015		

	Acciaio		Steel
Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301652

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **07.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7673 del 7/12/2023__P3118D__1957051

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02 — N° 730/0294752 — Page 1 / FIN — A09/A03

ArcelorMittal
ARCELORMITTAL MEDITERRANEE Site de FOS
13775 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: **FOS**

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINIMO 27 J MINIMOY

(5) B03

CDC: Conforme cahier charges / According specifications
BL : Brut de Laminage / As rolled
LN : Laminage normalisant / Normalization rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Détensionné / Stress relieving
A : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle Inspection organism	Client et/ou destinataire Customer and/or consignee	N° Commande Courtier/Client Customer's Order Nbr	N° Commande Usine Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison Delivery condition (1)
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-014 A07	GH3I012011 000014 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04
					Traitement de référence (1) Treatment of test samples BL B05

Identification du produit Product identification		Poste	Nombre de pièces Number of pieces	Dimensions / Sizes (mm)			Masse Weight	Emplacement	Traction / Tensile requirements										Emplacement	Résilience / Impact testing						
Repère pièce Plate number	Coulée Heat	Item		Epaisseur Thickness	Largeur Width	Longueur Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles Individual values	Moyenne Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C061	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-- -C42- -->	C43
1957051	730316224	001	1	8,000	2000,00		26079	1	T	P	PRISM	BL	20	477	589	27,7				1	BL	KV	L	- 20	P	140 148 131	140
1957052	730316224	001	1	8,000	2000,00		26226																			

NS. N. MATRICOLA
1 P3118
2 P3127

AC=C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,05 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce Plate number	N° Coulée Heat number	* Analyse sur produit / Check analysis					AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%
			C%	Mn%	P%	S%	Si%																			
C70/93 O/YCC	B07	B07 730316224	C71 0,185	C72 1,471	C73 0,016	C74 0,006	C75 0,018	C76 0,032	C77 0,0001	C78 0,033	C79 0,019	C80 0,005	C81 0,0039	C82 0,013	C83 0,014	C84 0,015	C85 0,002	C86	C87	C88	C89 0,44	C90 0,057	C91	C92	C96	C97

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(5)Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting C70/93

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 20/09/23
Agent / Receiving Agent
F. SIXDENIERS Z02

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FRANCHINI LAMIERE DDT Nr. 7673 del 7/12/2023__P3118D__1957051

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-014	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione CE Notified body 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione UKCA Approved body 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957051 1957052	730316224 730316224	000014 000014	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301657

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **13.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7759 del 12/12/2023__P3081D__1957054

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0294308 — Page 1 / FIN (A02 — A09/A03)

ArcelorMittal
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13776 FOS SUR MER CEDEX - FRANCE
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Sigle du producteur / Mill's identification: FOS

(5) T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINI/IND 27 J MINI/MOY (B03)

CPC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
CN : Laminage normalisant / Normalisation rolling
A : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Lamité temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
R : Détensionné / Stress relieving
Q : Adouci par trempe / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism (A05)	Client et/ou destinataire / Customer and/or consignee (A06)	N° Commande Client / Customer's Order Nbr (A07)	N° Commande Usine / Mill's Order Nbr (A08)	Nuances et spécifications techniques / Grade and technical specifications (B01/B02)	Etat de livraison / Delivery condition (1) (B04)	Traitement de référence / Treatment of test samples (1) (B05)
RECEPTION USINE	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE	23-278-015	GH3I012011 000015	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1	LTC : LN	BL

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements											Emplacement	Résilience / Impact testing								
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos. Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%						Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs Individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C05	C10		C03	C11	C12	C13	<-C14-C29			C60-C69->		C01		C40	C02	C08	C62	<-	-C42-	->	C43
1957053	730316226	001	1	8,000	2000,00		26129	1	T	P	PRISM	BL	20	488	592	23,3						1	BL	KV	L	- 20	P	127	147	136	137
1957054	730316226	001	1	8,000	2000,00		26236																							
1957055	730316226	001	1	8,000	2000,00		26295																							
1957050	730324441	001	1	8,000	2000,00		23539	1	T	P	PRISM	BL	20	496	602	23,3						1	BL	KV	L	- 20	P	124	150	148	141

NS. N. MATRICOLA
1 P 3049
2 P 3081

NS. N. MATRICOLA
3 P 3063
4 P 3075

AC:C =0,20 MAXI MN=1,50 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,05 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730316226	0,180	1,465	0,016	0,007	0,015	0,044	0,0001	0,023	0,023	0,004	0,0036	0,014	0,019	0,017	0,001				0,43	0,055					
O/YCC		730324441	0,178	1,522	0,015	0,005	0,014	0,036	0,0001	0,040	0,016	0,011	0,0031	0,014	0,017	0,015	0,004				0,45	0,051					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix (C01)

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick (C02)

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; C:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; X:Divers / Mix (C62)

(6) Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting (C70/93)

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. (D01)

Date 19/09/23
Agent / Receiving Agent
F. SIXDENIERS (Z02)

262

FRANCHINI LAMIERE DDT Nr. 7759 del 12/12/2023__P30810__1957054

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-015	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione CE Notified body 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012	Anno / Year 13
		http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	
	Organismo di Certificazione UKCA Approved body 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002	Anno / Year 13
		http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot-rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957053	730316226	000015	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
1957055	730316226	000015		
1957050	730324441	000015		
1957054	730316226	000015	Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo — Acciaio: Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability — Steel: Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301658

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **13.12.2023**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7760 del 12/12/2023__P3078D__1957046

INSPECTION CERTIFICATE — NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0294315 — Page 1 / FIN

A02 — A09/A03

ArcelorMittal
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13776 FOS SUR MER CEDEX - FRANCE
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Sigle du producteur / Mill's identification: **FOS**

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINIMO 27 J MINIMOY

(5) CDC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalisation rolling
R : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalising
S : Détensionné / Stress relieving
D : Adouci par recuit / Soft annealing
B03 (1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-017 A07	GH3I012011 000017 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04 Traitement de référence / Treatment of test samples: BL B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements											Emplacement	Résilience / Impact testing							
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-	-C42-	->	C43
1957046	730324437	001	1	10,000	2000,00		26207	1	T	P	PRISM	BL	20	493	600	25,6				1	BL	KV	L	- 20	P	155	150	151	152
2102032	730324437	001	1	10,000	2000,00		23006																					
1953048	730324439	001		10,000	2000,00			1	T	P	PRISM	BL	20	455	579	25,6				1	BL	KV	L	- 20	P	181	200	182	188
1953050	730324439	001	1	10,000	2000,00		26026																					

NS. N. MATRICOLA
1 P3078
2 P3083

NS. N. MATRICOLA
3 P3051

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730324437	0,187	1,452	0,018	0,004	0,018	0,034	0,0001	0,042	0,013	0,007	0,0025	0,015	0,014	0,015	0,002				0,44	0,062					
O/YCC		730324439	0,183	1,466	0,015	0,004	0,012	0,031	0,0001	0,022	0,016	0,003	0,0032	0,013	0,015	0,013	0,001				0,43	0,050					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; Q:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(6) Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pièces à titre indicatif. / Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. — D01

Date 19/09/23
Agent / Receiving Agent
F. SIXDENIERS — Z02

262

FRANCHINI LAMIERE DDT Nr. 7760 del 12/12/2023__P3078D__1957046

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-017	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione / Notified body / CE	Numero del certificato / Certificat number	Anno / Year
	0333	HR00017_CPR2013-07-01_IT_V012	13
		http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	
	Organismo di Certificazione / Approved body / UKCA	Numero del certificato / Certificat number	Anno / Year
	8510	HR00017_UKCA_IT_V002	13
		http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957046	730324437	000017	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
2102032	730324437	000017		
1953050	730324439	000017		

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301659

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

13.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7760 del 12/12/2023 _ P3127D _ 1957052

INSPECTION CERTIFICATE NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02 — N° 730/0294762 — Page 1 / FIN — A09/A03

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E: un.scu(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L -20dgC 19 J MINIMND 27 J MINIMOY — B03

(5)
CDC: Conforme cahier charges / According specifications
EL : Recuit de laminage / As rolled
LN : Laminage normalisant / Normalisation rolling
A : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalising
D : Décarburé / Excess relieving
R : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	Etat de livraison / Delivery condition (1)
RECEPTION USINE — A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE — A06	23-278-014 — A07	GH3I012011 000014 — A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 — B01 B02	LTC : LN — B04
					Traitement de référence / Treatment of test samples (1) BL — B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements										Emplacement	Résilience / Impact testing								
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%					Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C06	C10		C03	C11	C12	C13	<-C14-C29			C60-C69->	C01		C40	C02	C08	C62	<-	-C42-	->	C43
1957051	730316224	001	1	8,000	2000,00		26079	1	T	P	PRISM	BL	20	477	589	27,7					1	BL	KV	L	-20	P	140	148	131	140
1957052	730316224	001	1	8,000	2000,00		26226																						

NS. N. MATRICOLA
1 P3118
2 P3127

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
T=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,SP =0,090 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis C%	Mn%	P%	S%	SI%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%
C70/93 OAYCC	B07	B07 730316224	C71 0,185	C72 1,471	C73 0,016	C74 0,006	C75 0,018	C76 0,032	C77 0,0001	C78 0,033	C79 0,019	C80 0,006	C81 0,0039	C82 0,013	C83 0,014	C84 0,015	C85 0,002	C86	C87	C89	C89 0,44	C90 0,057	C91	C92	C96	C97

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length — C01
(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick; X:Divers / Mix — C02
(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; G:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62
(6) Mode élab.Melt.Coulée: T: Thomas M: Martin E: Electrique / Electric OAY: Oxy.sur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93
(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. — D01

Date 20/09/23
Agent / Receiving Agent
F. SIXDENIERS — Z02

263

FRANCHINI LAMIERE DDT Nr. 7760 del 12/12/2023__P3127D__1957052

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers	Nr Ordine Cliente Customer's order Nr	Nr Ordine Stabilimento Mill's order Nr	Specifica Tecnica Technical specification
	FRANCHINI LAMIERE SPA	23-278-014	GH3I012011	S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body	CE	Numero del certificato Certificat number	Anno / Year
	0333		HR00017_CPR2013-07-01_IT_V012	13
			http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	
	Organismo di Certificazione Approved body	UKCA	Numero del certificato Certificat number	Anno / Year
	8510		HR00017_UKCA_IT_V002	13
			http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957051	730316224	000014	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
1957052	730316224	000014		

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
FRANCHINI LAMIERE SPA	1723002024	123A90A	Q012301662

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

14.12.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

FRANCHINI LAMIERE DDT Nr. 7778 del 13/12/2023__P3127D__1957052

ArcelorMittal
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E: un.scu(a)arcelormittal.com

INSPECTION CERTIFICATE NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

A02

N° 730/0294762 Page 1 / FIN A09/A03

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L -20dgC 19 J MINI/IND 27 J MINI/MOY

B03 (5)

CDC: Conforme cahier charges / According specifications
BL : Bout de laminage / As rolled
LN : Laminage normalisant / Normalization rolling
A : Revenu / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Laminé temp. contrôlé / Control rolling
TM : Laminage thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalizing
D : Décarburé / Stress relieving
D : Adouci par recuit / Soft annealing
(1)

Organisme et/ou service de contrôle / Inspection organism	Client et/ou destinataire / Customer and/or consignee	N° Commande Courtier/Client / Customer's Order Nbr	N° Commande Usine / Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25010 SAN ZENO NAVIGLIO ITALIE A06	23-278-014 A07	GH3I012011 000014 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02

Etat de livraison / Delivery condition (1): LTC : LN B04

Traitement de référence / Treatment of test samples (1): BL B05

Identification du produit / Product identification		Poste	Nombre de pièces / Number of pieces	Dimensions / Sizes (mm)			Masse / Weight	Emplacement	Traction / Tensile requirements										Résilience / Impact testing							
Repère pièce / Plate number	Coulée / Heat	Item		Epaisseur / Thickness	Largeur / Width	Longueur / Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles / Individual values			Moyenne / Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C06	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C02	C08	C62	<-	C42	->	C43
1957051	730316224	001	1	8,000	2000,00		26079	1	T	P	PRISM	BL	20	477	589	27,7				1	BL	KV	L	-20	P	140	148	131	140
1957052	730316224	001	1	8,000	2000,00		26226																					

NS. N. MATRICOLA
1 P3118
2 P3127

C:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,099 MAXI

Meth. (6) of steel making	Repère Pièce / Plate number	N° Coulée / Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	AL%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02				%	
C70/93	B07	B07	C71	C72	C73	C74	C75	C78	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730316224	0,185	1,471	0,016	0,006	0,018	0,032	0,0001	0,033	0,019	0,006	0,0039	0,013	0,014	0,015	0,002				0,44	0,057					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers coul / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; D:1/3 Epais. / Thickness; C:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(5)Mode élab./Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric OXY: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 20/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

263

FRANCHINI LAMIERE DDT Nr. 7778 del 13/12/2023__P3127D__1957052

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-014	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione / Notified body / CE	Numero del certificato / Certificat number	Anno / Year
	0333	HR00017_CPR2013-07-01_IT_V012	13
		http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	
	Organismo di Certificazione / Approved body / UKCA	Numero del certificato / Certificat number	Anno / Year
	8510	HR00017_UKCA_IT_V002	13
		http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciao per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1957051	730316224	000014	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
1957052	730316224	000014		

Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilita Durata nel tempo	Acciaio Espresso cosi indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability	Steel Expressed as indicated in the DoP

FRANCHINI LAMIERE DDT Nr. 7778 del 13/12/2023__P3312D__1953052

ARCELORMITTAL MEDITERRANEE
13776 FOS SUR MER CEDEX

ArcelorMittal

Documento di controllo basato su un controllo specifico
Inspection document based on specific control
EN 10204

UK CA CE

Organismo di controllo Inspection Organisme Dipartimento Qualità Quality department	Cliente Customers FRANCHINI LAMIERE SPA	Nr Ordine Cliente Customer's order Nr 23-278-015	Nr Ordine Stabilimento Mill's order Nr GH3I012011	Specifica Tecnica Technical specification S355J2+N EN 10025-2:2019

Identificazione Prodotto Product identification	Organismo di Certificazione Notified body CE 0333	Numero del certificato Certificat number HR00017_CPR2013-07-01_IT_V012 http://dop.arcelormittal.net/pdf/HR00017_CPR2013-07-01_IT_V012_IT_IT.pdf	Anno / Year 13
	Organismo di Certificazione Approved body UKCA 8510	Numero del certificato Certificat number HR00017_UKCA_IT_V002 http://dop.arcelormittal.net/pdf/HR00017_UKCA_IT_V002_EN_IT.pdf	Anno / Year 13

Riferimento pezzo Part Number	Colata Heat	Riga Item	EN 10025-1 Prodotti in acciaio per costruzione laminati a caldo Utilizzi previsti: Utilizzo previsto per strutture saldate, bullonate e rivettate	EN 10025-1 Hot rolled structural steel products. Intended uses : Intended to be used in welded, bolted and riveted structures
1963040 1953052	730316226 730324440	000015 000015	Tolleranze sulle dimensioni e forma: prodotto secondo EN 10051	Tolerances on dimensions and shape: Conform to EN 10051
			Allungamento Resistenza a trazione Limite di snervamento Resilienza Saldabilità Durata nel tempo Acciaio Espresso così indicato nel DoP	Elongation Tensile strength Yield strength Impact strength Weldability Durability Steel Expressed as indicated in the DoP

FRANCHINI LAMIERE DDT Nr. 7778 del 13/12/2023__P3312D__1953052

3122/ 3402

INSPECTION CERTIFICATE NF EN 10204-3.1/DIN 50049-3.1.B/ISO 10474

N° 730/0295845 Page 1 / FIN

A02 A09/A03

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13776 FOS SUR MER CEDEX - FRANCE
T:+33(0)44247-3314 F:+33(0)44247-3231
E: un.sou(a)arcelormittal.com

Sigle du producteur / Mill's identification: FOS

T Re=355 MINI MPA Rm=470 -630 MPA A%(5,65)=20 MINI
KV L - 20dgC 19 J MINIMIND 27 J MINIMOY (5)

B03

CDC: Conforme cahier charges / According specifications
BL : Brut de laminage / As rolled
LN : Laminage normalisant / Normalisation rolling
N : Normé / Tempering
TE : Trempé à l'eau / Water quenching
LTC : Lamin& temp. contrôlé / Control rolling
TM : Lamingge thermomécanique / Thermo-mechanical forming
N : Normalisé / Normalising
D : Détensionné / stress relieving
D : Adoucl par recuit / Soft annealing

(1)

Organisme et/ou service de contrôle Inspection organism	Client et/ou destinataire Customer and/or consignee	N° Commande Courtier/Client Customer's Order Nbr	N° Commande Usine Mill's Order Nbr	Nuances et spécifications techniques / Grade and technical specifications	État de livraison Delivery condition (1)
RECEPTION USINE A05	FRANCHINI LAMIERE SPA VIA IV NOVEMBRE 32 I-25019 SAN ZENO NAVIGLIO ITALIE A06	23-278-015 A07	GH3I012011 000015 A08	S355J2+N-CAT_A EN10025-2:2019 HOT ROLLED COIL, AS ROLLED 2_S355J2+N-CL1 B01 B02	LTC : LN B04 Traitement de référence Treatment of test samples (1) BL B05

Identification du produit Product identification		Poste Item	Nombre de pièces Number of pieces	Dimensions / Sizes (mm)			Masse Weight	Empla.	Traction / Tensile requirements										Empla.	Résilience / Impact testing							
Repère pièce Plate number	Coulée Heat			Epaisseur Thickness	Largeur Width	Longueur Length	(kg) (7)	Loc (2)	S (3)	Pos Z(4)	Type	Réf Ref (5)	Temp.	ReEH	Rm	A%				Loc (2)	Réf Ref	Type	S (3)	Temp.	Pos. Z(4)	Valeurs individuelles Individual values			Moyenne Average
B07	B07	A07	B08	B09	B10	B11	B13	C01	C02	C062	C10		C03	C11	C12	C13	<-C14-C29		C60-C69->	C01		C40	C05	C08	C62	<-	-C42-	-->	C43
1957053	730316226	001		8,000	2000,00			1	T	P	PRISM	BL	-20	488	592	23,3													
1963040	730316226	001	1	8,000	2000,00		24596																						
1953052	730324440	001	1	8,000	2000,00		25669	1	T	P	PRISM	BL	20	479	576	26,2				1	BL	KV	L	-20	P	125	121	135	127
																				1	BL	KV	L	-20	P	127	147	138	137

NS. N. A°S7[illegible]CIA
1 P3335
2 P3312

AC:C =0,20 MAXI MN=1,60 MAXI P =0,025 MAXI S =0,025 MAXI SI=0,03 MAXI AL=0,02 -0,29 CU=0,39 MAXI NI=0,42 MAXI CR=0,29 MAXI NB=0,06 MAXI V =0,10 MAXI
TI=0,05 MAXI B =,0007 MAXI MO=0,11 MAXI CO=0,29 MAXI CEQ02=C+MN/6+(CU+NI)/15+(CR+MO+V)/5 =0,47 MAXI CBN02=SI+2,5P =0,090 MAXI

Meth. (6) of steel making	Repère Pièce Plate number	N° Coulée Heat number	* Analyse sur produit / Check analysis																								
			C%	Mn%	P%	S%	Si%	Al%	B %	CR%	CU%	MO%	N %	NB%	NI%	TI%	V %				CEQ02	CBN02					%
C70/93	B07	B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80	C81	C82	C83	C84	C85	C86	C87	C88	C89	C90	C91	C92	C96	C97	
O/YCC		730316226	0,180	1,465	0,016	0,007	0,015	0,044	0,0001	0,023	0,023	0,004	0,0035	0,014	0,019	0,017	0,001				0,43	0,055					
O/YCC		730324440	0,180	1,462	0,016	0,006	0,012	0,039	0,0001	0,045	0,018	0,011	0,0031	0,014	0,017	0,015	0,003				0,44	0,052					

OTHER ELEMENTS ARE AS TRACES ONLY

Emplacement/Location(2): 1 Tête / Head; 2 Pied / Bottom; 3 1/2 longueur / Length; X:Divers / Mix — C01

(3) Sens/Direction: L:Long / Longitudinal; T:Travers / Transverse; Z:Travers court / Through thick — C02

(4) Position: C:Coeur / Core sample; P:Peau / Rolled surface; 0:1/3 Epais. / Thickness; 0:1/4 Epais. / Thickness; F:1/5 Epais. / Thickness; K:Divers / Mix — C62

(6)Mode élab.Meth.Coulée: T: Thomas M: Martin E: Electrique / Electric O/Y: Oxy.pur / Basic oxyg. CC: Coulée Continue / Continuous casting — C70/93

(7) Masse et nb pièces à titre indicatif. Mass and quantity of pieces as a rough guide

We hereby certify that the above cited shipment was produced according to the technical specifications of the contract and that, with inspection and tests completed, it meets those specifications as well as all norms and standards referred to in the contract.

Contrôle de marquage, d'aspect et de dimensions : satisfaisants
Inspection of markings, surface, sizes : satisfactory. D01

Date 26/09/23
Agent / Receiving Agent
F. SIXDENIERS
Z02

289

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400064

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 15.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000459242-1724000079 1 LOTTO.-0000401032

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000459242

ordine cliente:
customer order: 1724000079 1 LOTTO.

documento di trasporto:
document of trasport DDT 0000401032

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

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0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

15/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

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10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING

Consegna	80621972

Committente	1500011109
	ROSETTI MARINO S.P.A.
Consegna	80621972
DDT	401032
OdV	459242
Riferimento Cliente	1724000079 1 LOTTO.
	Quantità in UMB (NO BDG)
	PZ
	6

						Quantità in UMB (NO BDG)
Pos.Cons	**Pos.OdV**	**Marca**	**SottoMarca**	**Descr. Materiale**	**CLASS-Colata**	PZ
900001	220	#	#	HEA3403521727	72415;	1
900002	230	#	#	HEA3403522328	72415;	1
900003	240	#	#	HEA3403522181	72415;	1
900004	240	#	#	HEA3403522181	63746;	1
900005	260	#	#	HEA3403521700	63746;	1
900007	250	#	#	HEA3403524299	72415;	1

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000401032
PIACCA/COLATA: 72415

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

3127/ 3402

CSN
Companhia Siderúrgica Nacional

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7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3128/ 3402

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2200/9-2023
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
2	72412	HE 340A	EN 10365	18.100 mm	2	3.800 kg
2	72415	HE 340A	EN 10365	18.100 mm	4	7.600 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72412	0,09	0,19	1,45	0,020	0,020	0,008	0,014	0,041	0,009	0,08
72415	0,07	0,18	1,43	0,018	0,021	0,010	0,016	0,039	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72412	0,28	0,14	0,03	0,024	0,38
72415	0,31	0,12	0,03	0,021	0,36

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72412	409	528	33,0	
72415	407	514	32,0	

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

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SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20028085
A07 Your Order No.: OSC2380349

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 2200/9-2023**
Advice No. 800155761

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
72412	KV 450	L	-20 °C	19 / 27	74	115	104	97
72415	KV 450	L	-20 °C	19 / 27	132	135	137	134

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

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23

CSN
Companhia Siderúrgica Nacional

SWT

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000401032
PLACCA/COLATA: 63746

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

3131/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

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Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3132/ 3402

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023060
A07 Your Order No.: OSC2270443

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 398/11-2022**
Advice No. 800130696

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	63750	HE 340A	EN 10365	20.100 mm	4	8.400 kg
5	63751	HE 340A	EN 10365	20.100 mm	1	2.105 kg
6	63746	HE 340A	EN 10365	24.100 mm	2	5.000 kg
6	63748	HE 340A	EN 10365	24.100 mm	2	4.995 kg
6	63749	HE 340A	EN 10365	24.100 mm	2	5.000 kg
18	63685	IPE 450	EN 10365	20.100 mm	3	4.655 kg
18	63686	IPE 450	EN 10365	20.100 mm	6	9.320 kg
18	63687	IPE 450	EN 10365	20.100 mm	2	3.120 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,20/0,22*	0,25	1,60	0,030	0,030					0,29
min		0,14								
63685	0,09	0,19	1,41	0,019	0,017	0,011	0,017	0,038	0,008	0,10
63686	0,10	0,20	1,40	0,016	0,017	0,010	0,016	0,040	0,008	0,09
63687	0,10	0,20	1,40	0,016	0,017	0,010	0,016	0,040	0,008	0,09
63746	0,08	0,19	1,43	0,013	0,018	0,012	0,015	0,039	0,007	0,06
63748	0,08	0,17	1,42	0,020	0,023	0,011	0,016	0,038	0,007	0,06
63749	0,10	0,22	1,39	0,018	0,009	0,011	0,021	0,039	0,007	0,08
63750	0,08	0,18	1,42	0,012	0,009	0,011	0,016	0,039	0,008	0,06
63751	0,08	0,19	1,41	0,019	0,019	0,011	0,017	0,037	0,007	0,10

*C <16mm/<40mm *CEV <16mm/<40mm

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46/0,48*
min					
63685	0,25	0,12	0,03	0,022	0,38
63686	0,24	0,12	0,03	0,023	0,38
63687	0,24	0,12	0,03	0,023	0,38

Z03 Works inspector
René Merbach

Z02 04.11.2022

Z04

CE

0769
22

SWT

STAHLWERK THÜRINGEN

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07333 Unterwellenborn
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A07 Your Order No.: OSC2270443

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according to: EN 10025-2/2019

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Advice No. 800130696

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according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Heat Analysis [%]

Heat No.	Cu	Ni	Mo	Ti	CEV
B07	C81	C82	C83	C84	C93
max	0,55	0,42	0,11		0,46/0,48*
min					
63746	0,14	0,09	0,02	0,021	0,35
63748	0,23	0,12	0,03	0,018	0,36
63749	0,25	0,12	0,03	0,016	0,38
63750	0,18	0,12	0,03	0,022	0,36
63751	0,31	0,16	0,03	0,023	0,37

*C <16mm/<40mm *CEV <16mm/<40mm

Tensile test (ISO 6892-1)

Heat No.	Yield stress [N/mm2]	Tensile strength [N/mm2]	Elongation $5.65\sqrt{S_0}$ [%]
B07	C11	C12	C13 C14
max		630	
min	355/345*	470	22,0
63685	405	540	31,0
63686	401	533	30,0
63687	416	537	31,0
63746	405	501	35,0
63748	404	504	32,0
63749	431	531	34,0
63750	420	533	34,0
63751	391	501	33,0

*Yield stress <16mm/<40mm

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
63685	KV 450	L	-20 °C	19 / 27	120	94	108	107
63686	KV 450	L	-20 °C	19 / 27	123	95	57	91

Z03 Works inspector
René Merbach

Z02 04.11.2022

Z04

CE

0769
22

SWT

STAHLWERK THÜRINGEN

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A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

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according to: EN 10025-2/2019

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Advice No. 800130696

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
63687	KV 450	L	-20 °C	19 / 27	126	126	82	111
63746	KV 450	L	-20 °C	19 / 27	146	158	168	157
63748	KV 450	L	-20 °C	19 / 27	136	108	131	125
63749	KV 450	L	-20 °C	19 / 27	167	145	141	151
63750	KV 450	L	-20 °C	19 / 27	151	151	150	150
63751	KV 450	L	-20 °C	19 / 27	131	115	146	130

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 04.11.2022

Z04

CE

0769
22
032 CPR 2020-10-04 SWT

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400160

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

25.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000469911-1724000079 123A90A-0000401905

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000469911

ordine cliente:
customer order: 1724000079 123A90A

documento di trasporto:
document of trasport DDT 0000401905

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

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0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

22/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 56645

PEINER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 1/3
Datum/Date 05.04.2022

Nr. (A07) OSC2280097 10.03.2022
Besteller MANNI SIPRE S.P.A.
Purchaser 37135 VERONA
(A06) ITALIEN

Nr. (A07) OSC2280097
Verbraucher MANNI SIPRE S.P.A.
Consumer 26013 CREMA (CREMONA)
ITALIEN

Erzeugnis Warmgewalzter Profilstahl gem. EN 10365
Product Hot rolled sections acc. to EN 10365
(B01)

Werkstoff und Lieferbedingung EN10025-2-S355J2+AR
Steel grade and terms of delivery EN 10025-2:2019
(B02-B03) Zum Verzinken: Si 0,15-0,25 %

Werksauftrags-Nr. 0000482345
Works order No.
(A08)
Lieferschein-Nr. 0090068655
Dispatch note No. 05.04.2022

Abnahme WS
Inspection
(A05)

Agent Nr./Agent No.: 202202138

Materialdaten / Material data (B01-B99)

Pos. Item	Schmelzen-Nr. Heat No. (B07)	Anzahl Quantity (B08)	Lieferzustand Cond. of delivery (B04)	Erzeugnis Product (B07)	Länge Length (B09-B11) mm	Gewicht Weight (B12) kg kgs
37	56645	12	AR	IPE330	18100	10.664
38	56645	18	AR	IPE330	18100	15.996
Σ		30	AR: wie gewalzt / as rolled			26.660

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

Schmelzenanalyse / Ladle analysis (C70-C99)

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,20	Si % 0,15 - 0,25	Mn % ≤ 1,60	P % ≤ 0,030	S % ≤ 0,030	N %	Al % ≤ 0,300	V % ≤ 0,10	Nb % ≤ 0,06	Ti % ≤ 0,05
56645	0,08	0,21	1,22	0,014	0,009	0,008	0,020	0,06	0,00	0,00

Schmelzen-Nr. Heat No. (B07)	Cu % ≤ 0,55	Cr % ≤ 0,30	Ni % ≤ 0,30	Mo % ≤ 0,08	EV1 1) % ≤ 0,45
56645	0,33	0,13	0,13	0,03	0,36

1) EV1 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15

Stahlherstellung: Elektroverfahren
Steel making: Electric process
(C70)

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)

Herstellerzeichen
Trademark
(A04)

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Str. 10
D-31226 Peine
(A01)

CE UK CA

Abnahmebeauftragter
Inspection Representative
(Z02)

Waldemar Mauch

Diese durch ein geeignetes Datenverarbeitungssystem erstellte Bescheinigung ist gemäß EN 10 204, Abschnitt 5, ohne Unterschrift gültig.
This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.

PEINER TRÄGER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 2/3
Datum/Date 05.04.2022

Nr. (A07) OSC2280097 10.03.2022
Besteller MANNI SIPRE S.P.A.
Purchaser 37135 VERONA
(A06) ITALIEN

Nr. (A07) OSC2280097
Verbraucher MANNI SIPRE S.P.A.
Consumer 26013 CREMA (CREMONA)
ITALIEN

Erzeugnis Warmgewalzter Profilstahl gem. EN 10365
Product Hot rolled sections acc. to EN 10365
(B01)

Werksauftrags-Nr. 0000482345
Works order No.
(A08)
Lieferschein-Nr. 0090068655
Dispatch note No. 05.04.2022

Werkstoff und Lieferbedingung EN10025-2-S355J2+AR
Steel grade and terms of delivery EN 10025-2:2019
(B02-B03) Zum Verzinken: Si 0,15-0,25 %

Abnahme WS
Inspection
(A05)

Zugversuch / Tensile test (C10-C29)

Schmelzen-Nr. Heat No. (B07)	Erzeugnis Product (C00)	Ort Location (C01) 1)	Richt. Direct. (C02) 2)	Form Type (C10) 3)	Streckgrenze Yield point (C11) ReH N/mm2 ≥ 355	Zugfestigkeit Tensile strength (C12) Rm N/mm2 470 - 630	Bruchdehnung Elongation (C13) A5 4) % ≥ 22		
56645	IPE330	FL	L	P	426	555	29		

1) FL: Flansch / Flange
2) L: längs / longitudinal
3) P: prismatisch / prismatic
4) A5: Lo=5,65 √So

Kerbschlagbiegeversuch / Impact test (C40-C49)

Schmelzen-Nr. Heat No. (B07)	Erzeugnis Product (C00)	Ort Location (C01) 1)	Richt. Direct. (C02) 2)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J ≥ 19	2	3	MW 3) J ≥ 27
56645	IPE330	FL	L	KV450	-020	150	158	166	158

1) FL: Flansch / Flange
2) L: längs / longitudinal
3) MW: Mittelwert / Average

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 0,1 Bq/g, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung (StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.

Our products are free of radioactive substances and do not exceed the clearing limit value of 0,1 Bq/g, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex 4, table 1, column 3) for ferrous nuclides.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)

Herstellerzeichen
Trademark
(A04)

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Str. 10
D-31226 Peine
(A01)

CE UK CA

Abnahmebeauftragter
Inspection Representative
(Z02)

Waldemar Mauch

Diese durch ein geeignetes Datenverarbeitungssystem erstellte Bescheinigung ist gemäß EN 10 204, Abschnitt 5, ohne Unterschrift gültig.
This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.

PEINER TRÄGER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 3/3
Datum/Date 05.04.2022

CE

0432

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Straße 10
D-31226 Peine

06

0432-CPR-1130-900056-01
DoP: PTG09-CPR-10025-10012020

UKCA

0836

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Straße 10
D-31226 Peine

22

UK 0836-CPR-22/F547
DoP: PTG09-UKCA-10025-14022022

EN 10025-1:2004

Warmgewalzte Baustahlprodukte
Hot rolled structural steel products
Produits en acier de construction laminé à chaud

Vorgesehene Verwendungen: Intended uses: Usages prévus:	Hochbauten und Ingenieurbauwerke Building constructions or civil engineering Construction de bâtiments ou génie civil
Grenzabmaße und Formtoleranzen: Tolerances on dimensions and shape: Tolérances sur les dimensions et la forme:	I- und H-Profile / I- and H-sections / Poutrelles I et H: EN 10034 U-Profile / U-profiles / Profilés U: EN 10279
Dehnung / Elongation / Élongation: Zugfestigkeit / Tensile strength / Résistance à la traction: Streckgrenze / Yield strength / Limite d'élasticité: Kerbschlagarbeit / Impact strength / Résistance au choc: Schweißeignung / Weldability / Soudabilité:	EN10025-2-S355J2+AR EN 10025-2
Dauerhaftigkeit: Durability: Durabilité:	Keine Leistung festgestellt No performance determined Aucune performance déterminée
Regulierter Stoff: Regulated substance: Substance Réglementée:	Keine Leistung festgestellt No performance determined Aucune performance déterminée

Die Leistungserklärungen (DoP) gem. EU Bauproduktenverordnung Nr. 305/2011 sind unter:
http://www.peinertraeger.de/de/Service/DoP/ Leistungserklärungen (DoP) verfügbar.

The Declaration of Performance acc. EU Construction Products Regulation No. 305/2011 are available for download under
http://www.peinertraeger.de/en/Service/DoP/ Declaration of Performance (DoP)

The Declaration of Performance acc. Construction Products Regulation and The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 are available for download under
http://www.peinertraeger.de/en/Service/DoP/ Declaration of Performance (DoP)

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 70798

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3143/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 101/7-2023**
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
28	70798	IPE 330	EN 10365	18.100 mm	4	3.550 kg
28	70799	IPE 330	EN 10365	18.100 mm	20	17.795 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70798	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08
70799	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70798	0,29	0,12	0,03	0,022	0,39
70799	0,29	0,12	0,03	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70798	434	539	28,0	
70799	437	542	30,0	

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
3144/ 3402
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 101/7-2023**
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
70798	KV 450	L	-20 °C	19 / 27	47	75	42	54
70799	KV 450	L	-20 °C	19 / 27	55	58	41	51

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
3145/ 34023

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 71514

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3147/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027758
A07 Your Order No.: OSC2380314

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 1953/8-2023
Advice No. 800153234

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
12	71514	IPE 330	EN 10365	18.100 mm	30	27.020 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
71514	0,08	0,17	1,43	0,021	0,020	0,007	0,014	0,040	0,007	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
71514	0,29	0,13	0,03	0,023	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
71514	419	551	28,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
71514	KV 450	L	-20 °C	19 / 27	52	62	55	56

Z03 Works inspector
René Merbach

Z02 29.08.2023

Z04 CE 0769

3148/ 34023

032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A03 **Certificate No. 1953/8-2023**
Advice No. 800153234

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027758
A07 Your Order No.: OSC2380314

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 29.08.2023

Z04

CE

0769
3149/ 34023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 225533

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871339838	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340029	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340232	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.455**
19768871340247	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340525	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871339364	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.454**
19768871339511	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.455**
7 paquetes			**28 barras**		**24.180 Kg**

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

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20212 OLABERRIA (Gipuzkoa)

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ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

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ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

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20212 OLABERRIA (Gipuzkoa)
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A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1818651

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225533	,08	1,01	,20	,023	,024	,010	,003	,140	,450	,220	,034	,028						,33
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225533	403	504	34,1		-20º	7,5	107	121	36	88
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

2 / 2 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
MARTIN RODRIGUEZ O NORBERTO ALMANDOZ 5-1º B 20100 ERRENTERIA GIPUZKOA N.I.F. 34095204G

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

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20212 OLABERRIA (Gipuzkoa)

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ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

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ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCKS PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
spedizioni.crema@mannigroup.com
marianna.rigamonti@mannigroup.com
COVER MATERIAL

Ref: 1100685201

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

3152/3402

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 225536

AENOR AENOR ACERO ESTRUCTURAL UKCA 0086 CPR 753114 CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871138120	**IPE 330**	**11,4 m.**	**8**	**225536**	**4.322**
19768871138427	**IPE 330**	**11,4 m.**	**8**	**225536**	**4.322**
19768871139540	**IPE 330**	**13,1 m.**	**8**	**225536**	**4.966**
19768871139853	**IPE 330**	**12,7 m.**	**8**	**225536**	**4.815**
19768871139988	**IPE 330**	**12,7 m.**	**8**	**225536**	**4.815**

5 paquetes **40 barras** **23.240 Kg**

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UK CA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1815377

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

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VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 1 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
fabio.scapinello@mannigroup.com
COVER MATERIAL

Ref: 1100686910

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez
20191023/021803	16:30
YOUNES EL ASSAS	18:06
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

3157/3402

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

3159/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400160

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

25.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000469911-1724000079 123A90A-0000401905

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000469911

ordine cliente:
customer order: 1724000079 123A90A

documento di trasporto:
document of trasport DDT 0000401905

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

22/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 56645

PEINER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 1/3
Datum/Date 05.04.2022

Nr. (A07) OSC2280097 10.03.2022
Besteller MANNI SIPRE S.P.A.
Purchaser 37135 VERONA
(A06) ITALIEN

Nr. (A07) OSC2280097
Verbraucher MANNI SIPRE S.P.A.
Consumer 26013 CREMA (CREMONA)
ITALIEN

Erzeugnis Warmgewalzter Profilstahl gem. EN 10365
Product Hot rolled sections acc. to EN 10365
(B01)

Werkstoff und Lieferbedingung EN10025-2-S355J2+AR
Steel grade and terms of delivery EN 10025-2:2019
(B02-B03) Zum Verzinken: Si 0,15-0,25 %

Werksauftrags-Nr. 0000482345
Works order No.
(A08)
Lieferschein-Nr. 0090068655
Dispatch note No. 05.04.2022

Abnahme WS
Inspection
(A05)

Agent Nr./Agent No.: 202202138

Materialdaten / Material data (B01-B99)

Pos. Item	Schmelzen-Nr. Heat No. (B07)	Anzahl Quantity (B08)	Lieferzustand Cond. of delivery (B04)	Erzeugnis Product (B07)	Länge Length (B09-B11) mm	Gewicht Weight (B12) kg kgs
37	56645	12	AR	IPE330	18100	10.664
38	56645	18	AR	IPE330	18100	15.996
Σ		30	AR: wie gewalzt / as rolled			26.660

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

Schmelzenanalyse / Ladle analysis (C70-C99)

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,20	Si % 0,15 - 0,25	Mn % ≤ 1,60	P % ≤ 0,030	S % ≤ 0,030	N %	Al % ≤ 0,300	V % ≤ 0,10	Nb % ≤ 0,06	Ti % ≤ 0,05
56645	0,08	0,21	1,22	0,014	0,009	0,008	0,020	0,06	0,00	0,00

Schmelzen-Nr. Heat No. (B07)	Cu % ≤ 0,55	Cr % ≤ 0,30	Ni % ≤ 0,30	Mo % ≤ 0,08	EV1 1) % ≤ 0,45
56645	0,33	0,13	0,13	0,03	0,36

1) EV1 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15

Stahlherstellung: Elektroverfahren
Steel making: Electric process
(C70)

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)

Herstellerzeichen
Trademark
(A04)

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Str. 10
D-31226 Peine
(A01)

CE UK CA

Abnahmebeauftragter
Inspection Representative
(Z02)

Waldemar Mauch

Diese durch ein geeignetes Datenverarbeitungssystem erstellte Bescheinigung ist gemäß EN 10 204, Abschnitt 5, ohne Unterschrift gültig.
This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.

PEINER TRÄGER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 2/3
Datum/Date 05.04.2022

Nr. (A07) OSC2280097 10.03.2022
Besteller MANNI SIPRE S.P.A.
Purchaser 37135 VERONA
(A06) ITALIEN

Nr. (A07) OSC2280097
Verbraucher MANNI SIPRE S.P.A.
Consumer 26013 CREMA (CREMONA)
ITALIEN

Erzeugnis Warmgewalzter Profilstahl gem. EN 10365
Product Hot rolled sections acc. to EN 10365
(B01)

Werksauftrags-Nr. 0000482345
Works order No.
(A08)
Lieferschein-Nr. 0090068655
Dispatch note No. 05.04.2022

Werkstoff und Lieferbedingung EN10025-2-S355J2+AR
Steel grade and terms of delivery EN 10025-2:2019
(B02-B03) Zum Verzinken: Si 0,15-0,25 %

Abnahme WS
Inspection
(A05)

Zugversuch / Tensile test (C10-C29)

Schmelzen-Nr. Heat No. (B07)	Erzeugnis Product (C00)	Ort Location (C01) 1)	Richt. Direct. (C02) 2)	Form Type (C10) 3)	Streckgrenze Yield point (C11) ReH N/mm2 ≥ 355	Zugfestigkeit Tensile strength (C12) Rm N/mm2 470 - 630	Bruchdehnung Elongation (C13) A5 4) % ≥ 22		
56645	IPE330	FL	L	P	426	555	29		

1) FL: Flansch / Flange
2) L: längs / longitudinal
3) P: prismatisch / prismatic
4) A5: Lo=5,65 √So

Kerbschlagbiegeversuch / Impact test (C40-C49)

Schmelzen-Nr. Heat No. (B07)	Erzeugnis Product (C00)	Ort Location (C01) 1)	Richt. Direct. (C02) 2)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J ≥ 19	2	3	MW 3) J ≥ 27
56645	IPE330	FL	L	KV450	-020	150	158	166	158

1) FL: Flansch / Flange
2) L: längs / longitudinal
3) MW: Mittelwert / Average

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 0,1 Bq/g, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung (StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage 4, Tabelle 1, Spalte 3) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.

Our products are free of radioactive substances and do not exceed the clearing limit value of 0,1 Bq/g, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex 4, table 1, column 3) for ferrous nuclides.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)

Herstellerzeichen
Trademark
(A04)

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Str. 10
D-31226 Peine
(A01)

CE UKCA

Abnahmebeauftragter
Inspection Representative
(Z02)

Waldemar Mauch

Diese durch ein geeignetes Datenverarbeitungssystem erstellte Bescheinigung ist gemäß EN 10 204, Abschnitt 5, ohne Unterschrift gültig.
This certificate was prepared by a suitable data processing system and is valid without signature according to EN 10 204, section 5.

PEINER TRÄGER
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.1
Inspection certificate 3.1
DIN EN 10204
(A02)

Nr./No. (A03) **935192**
Seite/Page 3/3
Datum/Date 05.04.2022

CE

0432

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Straße 10
D-31226 Peine

06

0432-CPR-1130-900056-01
DoP: PTG09-CPR-10025-10012020

UKCA

0836

Peiner Träger GmbH
Gerhard-Lucas-Meyer-Straße 10
D-31226 Peine

22

UK 0836-CPR-22/F547
DoP: PTG09-UKCA-10025-14022022

EN 10025-1:2004

Warmgewalzte Baustahlprodukte
Hot rolled structural steel products
Produits en acier de construction laminé à chaud

Vorgesehene Verwendungen: Intended uses: Usages prévus:	Hochbauten und Ingenieurbauwerke Building constructions or civil engineering Construction de bâtiments ou génie civil
Grenzabmaße und Formtoleranzen: Tolerances on dimensions and shape: Tolérances sur les dimensions et la forme:	I- und H-Profile / I- and H-sections / Poutrelles I et H: EN 10034 U-Profile / U-profiles / Profilés U: EN 10279
Dehnung / Elongation / Élongation: Zugfestigkeit / Tensile strength / Résistance à la traction: Streckgrenze / Yield strength / Limite d'élasticité: Kerbschlagarbeit / Impact strength / Résistance au choc: Schweißeignung / Weldability / Soudabilité:	EN10025-2-S355J2+AR EN 10025-2
Dauerhaftigkeit: Durability: Durabilité:	Keine Leistung festgestellt No performance determined Aucune performance déterminée
Regulierter Stoff: Regulated substance: Substance Réglementée:	Keine Leistung festgestellt No performance determined Aucune performance déterminée

Die Leistungserklärungen (DoP) gem. EU Bauproduktenverordnung Nr. 305/2011 sind unter:
http://www.peinertraeger.de/de/Service/DoP/ Leistungserklärungen (DoP) verfügbar.

The Declaration of Performance acc. EU Construction Products Regulation No. 305/2011 are available for download under
http://www.peinertraeger.de/en/Service/DoP/ Declaration of Performance (DoP)

The Declaration of Performance acc. Construction Products Regulation and The Construction Products (Amendment etc.) (EU Exit) Regulations 2020 are available for download under
http://www.peinertraeger.de/en/Service/DoP/ Declaration of Performance (DoP)

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 70798

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3167/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 101/7-2023**
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
28	70798	IPE 330	EN 10365	18.100 mm	4	3.550 kg
28	70799	IPE 330	EN 10365	18.100 mm	20	17.795 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
70798	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08
70799	0,10	0,18	1,43	0,020	0,023	0,011	0,014	0,040	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
70798	0,29	0,12	0,03	0,022	0,39
70799	0,29	0,12	0,03	0,022	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
70798	434	539	28,0	
70799	437	542	30,0	

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769
3168/ 3402
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027262
A07 Your Order No.: OSC2380255

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 101/7-2023**
Advice No. 800151189

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Impact test (ISO 148-1)

Heat No.	Type/Shape	Direction	Temperature	Requirement 1,2,3/M	1 [J]	2	3	M
B07	C40/C41	C02	C03		C42	C42	C42	C43
70798	KV 450	L	-20 °C	19 / 27	47	75	42	54
70799	KV 450	L	-20 °C	19 / 27	55	58	41	51

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 03.07.2023

Z04

CE

0769

3169/ 34023

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 71514

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3171/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027758
A07 Your Order No.: OSC2380314

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 1953/8-2023
Advice No. 800153234

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
12	71514	IPE 330	EN 10365	18.100 mm	30	27.020 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
71514	0,08	0,17	1,43	0,021	0,020	0,007	0,014	0,040	0,007	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
71514	0,29	0,13	0,03	0,023	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
71514	419	551	28,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
71514	KV 450	L	-20 °C	19 / 27	52	62	55	56

Z03 Works inspector
René Merbach

Z02 29.08.2023

Z04

CE

0769
3172/ 3402
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027758
A07 Your Order No.: OSC2380314

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1953/8-2023**
Advice No. 800153234

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 29.08.2023

Z04

CE

0769
3173/ 3402
032 CPR 2020-10-01 SWT

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 225533

0086 CPR 753114

09-0099
AMOL-2/09-CPR-13-1
EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871339838	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340029	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340232	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.455**
19768871340247	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871340525	**IPE 330**	**18,1 m.**	**4**	**225533**	**3.454**
19768871339364	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.454**
19768871339511	**IPE 330**	**18,1 m.**	**4**	**225536**	**3.455**
7 paquetes			**28 barras**		**24.180 Kg**

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

3174/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1818651

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
		C	Mn	Si	P	S	N	V	Cr	Cu	Ni	Mo	Nb						Cev
B11	B08	C71	C72	C73	C74	C75	C76	C77	C78										
IPE-330	225533	,08	1,01	,20	,023	,024	,010	,003	,140	,450	,220	,034	,028						,33
IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225533	403	504	34,1		-20º	7,5	107	121	36	88
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

2 / 2 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA
MARTIN RODRIGUEZ O NORBERTO ALMANDOZ 5-1º B 20100 ERRENTERIA GIPUZKOA N.I.F. 34095204G

OPERADOR DE TRANSPORTE
EUROLOGISTIC SRL VIA COLA MONTANO, 26 20159 MILANO ITALIA C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

3175/3402

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1818651

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-86957	**27/10/23**	**OSC2380455**	**26/10/23**	**15/12/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via Gaeta, 23 26013 CREMA ITALIA CAMIÓN EN:CREMA (CREMONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 2 TRUCKS PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
spedizioni.crema@mannigroup.com
marianna.rigamonti@mannigroup.com
COVER MATERIAL

Ref: 1100685201

TRANSBORDO CAMIÓN - VAGÓN: Railsider Irún - 20303 Irún

TRANSPORTISTA

MARTIN RODRIGUEZ O
NORBERTO ALMANDOZ 5-1º B
20100 ERRENTERIA
GIPUZKOA
N.I.F. 34095204G

OPERADOR DE TRANSPORTE

EUROLOGISTIC SRL
VIA COLA MONTANO, 26
20159 MILANO
ITALIA
C.I.F. 07727510963

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
13.440	**37.620**	**24.180**

VEHICULO / REMOLQUE	POR EXPEDICIONES
5846JBR / R6980BDJ **OSCAR MARTIN RODRIGUEZ** **D.N.I. 34095204G**	Alvaro Lopez 7:24 8:51

Olaberría, viernes, 15 de diciembre de 2023

3176/3402

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ArcelorMittal

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			**Prestazione**		**Specifica tecnica armonizzata**
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000401905
PLACCA/COLATA: 225536

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

LISTA DE PAQUETES

S 355 J2+M - EN 10025-2/2019

Nº PAQUETE	DENOMINACIÓN	LONGITUD	BARRAS	Nº COLADA	PESO (Kg)
	B11	B12	B10	B08	B14
19768871138120	**IPE 330**	**11,4 m.**	**8**	**225536**	**4.322**
19768871138427	**IPE 330**	**11,4 m.**	**8**	**225536**	**4.322**
19768871139540	**IPE 330**	**13,1 m.**	**8**	**225536**	**4.966**
19768871139853	**IPE 330**	**12,7 m.**	**8**	**225536**	**4.815**
19768871139988	**IPE 330**	**12,7 m.**	**8**	**225536**	**4.815**

5 paquetes **40 barras** **23.240 Kg**

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

0086 CPR 753114

09-0099

AMOL-2/09-CPR-13-1

EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

A02 EN 10204/3.1

CERTIFICADO DE CALIDAD - QUALITY CERTIFICATE

A03 OLA1815377

S 355 J2+M - EN 10025-2/2019 (B01/B02/B03)

Tolerancias dimensionales y de forma - Tolerances on shape and dimensions : EN 10.034

C70:E

MATERIAL SIZE	COLADA HEAT	COMPOSICION QUIMICA (%) CHEMICAL COMPOSITION (%)																	
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IPE-330	225536	,07	,95	,19	,016	,020	,012	,002	,110	,490	,250	,036	,027						,31

MATERIAL SIZE	COLADA HEAT	PROPIEDADES MECANICAS MECHANICAL PROPERTIES				FLEXIÓN POR CHOQUE IMPACT TEST					
		ReH MPa	Rm MPa	A% L0=5.65VSo	Doblado 180º	ºC	KV300	V1 j.	V2 j.	V3 j.	Media j.
B11	B08	C11	C12	C13	C50	C03	C40/41	C42			C43
IPE-330	225536	414	506	31,5		-20º	7,5	128	145	133	135

1 / 1 análisis

Responsable del Departamento de Calidad Z01

D01: Certificamos que los aceros arriba indicados han sido satisfactoriamente probados de acuerdo con la especificación.

B06: Marca AMO
Productos laminados en caliente de aceros para estructuras
Diseñado para ser utilizado en estructuras soldadas, atornilladas y remachadas

Jose Maria Galindo

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

A01

ArcelorMittal Olaberria-Bergara, S.L.U.

ArcelorMittal Europe – Long Products

CARRETERA MADRID - IRUN, KM. 417

20212 OLABERRIA (Gipuzkoa)

TELEF. (943) 80.50.00 - FAX (943) 88.04.04

ESB20435301

ArcelorMittal

AENOR

AENOR ACERO ESTRUCTURAL

UKCA 0086 CPR 753114

CE 09-0099 AMOL-2/09-CPR-13-1 EN 10025-1:2004

CLIENTE

Información online en www.ris.arcelormittal.net

ALBARAN DE SALIDA OLA 1815377

DATOS DEL PEDIDO		DATOS DEL CLIENTE		ALBARÁN
A07 Nº	FECHA	S/PEDIDO	FECHA	FECHA
01-E-87281	**17/11/23**	**OSC2370636**	**17/11/23**	**30/11/23**

ALMACÉN DE CARGA / CERTIFICADO POR

ARCELORMITTAL OLABERRIA
CARRETERA MADRID - IRUN, KM. 417
20212 OLABERRIA (Gipuzkoa)
TELEF. (943) 80.50.00 - FAX (943) 88.04.04

A06.1 CLIENTE	DESTINO	DIRECCIÓN DE DESCARGA
MANNI SIPRE S.P.A. VIA A. RIGHI 7 37135 VERONA ITALIA	*ITALIA* *ITALIA* *EUROPA (COMUNIDAD)*	**MANNISIPRE s.p.a.** Via I Maggio 37060 MOZZECANE ITALIA CAMIÓN EN:MOZZECANE (VERONA)

OBSERVACIONES

delivery schedule: 8:30-10:30/14:30-16:30
DELIVER MAX 1 TRUCK PER DAY
BEFORE BOOK THE UNLOADING BY E-MAIL TO
fabio.scapinello@mannigroup.com
COVER MATERIAL

Ref: 1100686910

TRANSPORTISTA

FERTRANS SPAGNA , SL
AV. DELS PORTS D EUROPA, S/ N 100 DES .1
BARCELONA
BARCELONA
N.I.F. B65925687

OPERADOR DE TRANSPORTE

FERTRANS SRL
STRADA SALSEDIANA OVEST 1197
29010 ALSENO
ITALIA
V.A.T. IT01347580332

TARA (Kg)	BRUTO (Kg)	NETO (Kg)
14.400	**37.640**	**23.240**

VEHICULO / REMOLQUE	POR EXPEDICIONES
9490KHJ / AF56819	
0001-IN24-2020-000211	Alvaro Lopez 16:30
20191023/021803	18:06
YOUNES EL ASSAS	
D.N.I. 11452194B	

Olaberría, jueves, 30 de noviembre de 2023

3181/3402

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-5/02-CPR-13-1

1) Codice tipologia del prodotto: **1.8965**

2) Tipo: **Sections/Bars S355J2W secondo EN 10025-5**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	40	470	630	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		40	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	NPD		
		16			
	16	40			
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min	max	
		40		C : 0,16 S : 0,035 Si : 0,50 N* : 0,009 P : 0,035	
			Mn : 0,50 Cu : 0,25 Cr : 0,40	Mn : 1,50 Cu : 0,55 Cr : 0,80	
	* È ammesso superare i valori indicati, sempre che per ogni aumento del 0,001% di N il contenuto di Pmax venga ridotto del 0,005%; il contenuto N dell'analisi di colata non dovrà comunquesuperare lo 0,012%. Il valore massimo per l'azoto non si applica nel caso la composizione chimica evidenzi il contenuto minimo totale di Al pari a 0,020% oppure quando siano sufficienti altri elementi leganti N				
	Aggiunta di elementi leganti l'azoto: gli acciai devono contenere almeno uno dei seguenti elementi: Al totale ≥ 0,020%, Nb: 0,015 - 0,060%, V: 0,02-0,12%, Ti: 0,02 - 0,10%. Se questi elementi sono usati in combinazione, almeno uno di loro dovrà essere presente con il contenuto minimo indicato.				
	Questi acciai possono presentare un tenore massimo di Nb dello 0,65%. Gli acciai possono contenere un massimo di 0,30% Mo e un massimo di 0,15% Zr.				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

Dichiarazione di Prestazione
(in accordo al regolamento UE No 305/2011)

No. AMOL-2/09-CPR-13-1

1) Codice tipologia del prodotto: **1.0577**

2) Tipo: **Sections/Bars S355J2 secondo EN 10025-2**

Uso o usi previsti del prodotto da costruzione, conformemente alla relativa specifica tecnica armonizzata, come previsto dal fabbricante:

Da utilizzarsi per strutture saldate, bullonate o rivettate

3) ArcelorMittal Gipuzkoa, S.L.U.
Fábrica de Olaberria
Carretera Madrid - Irún, Km. 417
20212 – Olaberria (Guipúzcoa) Spain
T +34 943 805 000
www.arcelormittal.com/sections

Sistema o sistemi di valutazione e verifica della costanza della prestazione del prodotto da costruzione:
Sistema 2+

L'organismo di certificazione No. 0099 AENOR abilitato al controllo di produzione aziendale ha provveduto all'ispezione iniziale dello stabilimento di produzione e del sistema di controllo, di supervisione, di valutazione e di classificazione della produzione, e pertanto rilascia il certificato di conformità al sistema di controllo della produzione aziendale.

La prestazione del prodotto di cui ai punti 1 e 2 è conforme alla prestazione dichiarata in tabella.

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante di cui al punto 3.
Firmato a nome e per conto di:

Lorenzo Zabala
Head of Quality Department

Data: 01.07.2013

Caratteristiche essenziali			Prestazione		Specifica tecnica armonizzata
Tolleranze sulle dimensioni e sulla forma	Angolari		EN10056-2		EN 10025-1:2004
	Profili I e H		EN 10034		
	Profili I ad ali inclinate		EN 10024		
	UPE, UPN		EN 10279		
	Piatti / Quadri / Tondi / Profili T		EN 10058/EN 10059/EN 10060/EN 10055		
Limite elastico minimo	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min		
		16	355		
	16	40	345		
	40	63	335		
	63	80	325		
	80	100	315		
	100	140	295		
Resistenza allo snervamento	**Spessore nominale (mm)**		**Valori (MPa)**		
	>	≤	min	max	
	=3	100	470	630	
	100	140	450	600	
Allungamento	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	min		
	=3	40	22		
	40	63	21		
	63	100	20		
	100	140	18		
Resilienza	**Spessore nominale (mm)**		**Valori (J)**		
	>	≤	min		
		140	27 a -20°C		
Saldabilità	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		30	0,45		
	30	40	0,47		
	40	140	0,47		
Durabilità (Composizione chimica)	**Spessore nominale (mm)**		**Valori (%)**		
	>	≤	max		
		140	C* : 0,20 Si : 0,55 Mn : 1,60	Cu : 0,55 S : 0,030 P : 0,030	
	* Per spessori nominali > 30mm: C = 0,22% max . Per spessori nominali > 100mm: Contenuto di C da concordare				
	Acciaio completamente calmato contenente elemento legante l'azoto in quantità sufficienti da legare l'azoto disponibile (per es. AL min. 0,02% Al)				

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400159

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

25.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000203772
PLACCA/COLATA: 76914

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3186/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3188/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20031128
A07 Your Order No.: OSC2460081

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 771/3-2024**
Advice No. 800171982

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
7	76914	UPN 220	EN 10365	12.100 mm	30	10.595 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
76914	0,07	0,20	1,47	0,014	0,014	0,012	0,016	0,041	0,008	0,06

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
76914	0,17	0,12	0,03	0,021	0,35

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
76914	426	528	27,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
76914	KV 450	L	-20 °C	19 / 27	159	143	159	153

Z03 Works inspector
René Merbach

Z02 08.03.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
3189/ 3402/24
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A03 **Certificate No. 771/3-2024**
Advice No. 800171982

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20031128
A07 Your Order No.: OSC2460081

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 08.03.2024

Z04

UK 0836
24
032 UK CPR 2022-01-01 SWT

0769
3190/ 3402
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3192/ 3402

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400157

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **22.03.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000469911-1724000079 123A90A-0000107721

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000469911

ordine cliente:
customer order: 1724000079 123A90A

documento di trasporto:
document of trasport DDT 0000107721

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.

- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

22/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000107721
PLACCA/COLATA: 72410

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3197/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027490
A07 Your Order No.: OSC2380284

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 # Certificate No. 2198/9-2023
Advice No. 800155742

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06
MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	72410	HE 340A	EN 10365	20.100 mm	5	10.535 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
72410	0,09	0,18	1,45	0,025	0,019	0,008	0,011	0,039	0,008	0,11

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
72410	0,34	0,15	0,03	0,023	0,39

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
72410	409	541	32,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
72410	KV 450	L	-20 °C	19 / 27	89	124	92	101

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04 CE 0769

3198/ 34023

032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A03 **Certificate No. 2198/9-2023**
Advice No. 800155742

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20027490
A07 Your Order No.: OSC2380284

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A04
A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 13.09.2023

Z04

CE

0769
3199/ 34023
032 CPR 2020-10-01 SWT

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000107721
PLACCA/COLATA: 75287

CSN
Companhia Siderúrgica Nacional

SWT
THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3201/ 3402

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3203/ 3402

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 848/1-2024**
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
5	75287	IPE 240	EN 10365	18.100 mm	20	11.035 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C77	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
75287	0,08	0,22	1,48	0,016	0,016	0,011	0,020	0,043	0,009	0,07

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
75287	0,22	0,12	0,03	0,024	0,37

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	355	470	22,0	
75287	387	547	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
75287	KV 450/7.5	L	-20 °C	14 / 20	110	109	135	118

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK CA
UK 0836
24
032 UK CPR 2022-01-01 SWT

CE
0769
3204/ 3402 24
032 CPR 2020-10-01 SWT

STAHLWERK THÜRINGEN

A03 **Certificate No. 848/1-2024**
Advice No. 800165233

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20029406
A07 Your Order No.: OSC2370554

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A06

MANNI SIPRE SPA
Via a Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 09.01.2024

Z04

UK 0836
24
032 UK CPR 2022-01-01 SWT

0769
3205/ 3402
032 CPR 2020-10-01 SWT

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 UK-CPR 2022-01-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0836

British Board of Agrément
Bucknalls Lane
Watford
Hertfordshire WD25 9BA

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of January 2022

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3207/ 3402

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000469911
RIF. ORDINE: 1724000079 123A90A
DDT: 0000107721
PLACCA/COLATA: 80174

Mill Test Certificate NrX 5020859

Delivery note number 5020859 from 15 January 2024 A03

A08 Our reference : 1100685187

A07 Your reference : OSC2370579
26.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000003	HE 340 A	24.100 mm	2,479 to	80174	2,479 to		1
000006	HE 340 B	24.100 mm	9,492 to	80183	9,492 to		3

Heat nr B07	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					**0,14**												**0,020**
Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,220**			**0,45**	**100,0**
80174	0,07	0,71	0,020	0,014	0,17	0,009	0,004	0,35	0,14	0,11	0,034	0,002	0,040	0,001	0,0005	0,26	0,023
80183	0,07	0,71	0,021	0,017	0,18	0,010	0,004	0,30	0,13	0,15	0,034	0,002	0,040	0,001	0,0005	0,26	0,023

Heat nr	Tensile test N/mm2 ReH	N/mm2 Rm	5,65VS A(%)	Charpy impact test C40 KV Position	mm	UNAGED °C	J 1	2	3	M
B07	C11	C12	C13	C01	C02	C41 C03	C42			C43
Min	**345**	**470**	**22,00**	**FL.1/3**	**L**	**-20**		**19**		**27**
Max		**630**								
80174	461	557	22,14	FL.1/3	L	-20	239	198	254	230
80183	475	564	23,67	FL.1/3	L	-20	182	158	148	163

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
3208/ 3402

EN 10168:2004

A10 Sales Agent:

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 5020859

Delivery note number 5020859 from 15 January 2024 A03

A08 Our reference : 1100685187

A07 Your reference : OSC2370579
26.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
3209/ 3402

EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400088

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

01.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000459242-1724000079 1 LOTTO.-0000202018

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione — 0000459242
production code

ordine cliente: — 1724000079 1 LOTTO.
customer order:

documento di trasporto: — DDT 0000202018
document of trasport

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	PRESTAZIONI DICHIARATE *DECLARED PERFORMANCE*		NORMA ARMONIZZATA *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1* *(if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

ArcelorMittal Hunedoara S.A.
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202018
PLACCA/COLATA: 73171

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE
SR EN 10204:2005 (EN 10204:2004) 3.1

ArcelorMittal HUNEDOARA S.A:
Quality Inspection & Statistics
Hunedoara-Romania Cod 331111

Destinatar / Destined to:
MANNI SIPRE SPA

Nr. / No.: 1450090706
Data / Date 26.01.2024

Adresa/Address: VIA SCOPA, 20, 63076, MONTEPRANDONE
Tara/State: Italy

Comanda nr. / Order no.: 1100688212
Comanda data / Order date: 04.12.2023

Vagon/Wagon / Auto/Truck:
HD17CHI/HD52CHI

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color: Remarks: 0,14≤%Si≤0,25 – suitable for galvanization

DOP: AMHU-2/09 CPR-13-1

Observatii / Remarks:

Nr.Crt / No.Item	Nr.Sarja / Heat No	Marca / Quality	Produs / Product	Buc. / Pieces	Cantitate / Quantity [to]	Lungime / Length [mm]	Toleranta la lungime / Tolerance To length [mm]	Incercari mecanice/Mechanical tests								
								ReH	Rm	A5	Incovoiere prin soc / Charpy impact test					
								[N/mm^2]	[N/mm^2]	[%]	Tip epruveta / Type of semple	Temp [^{O}C]	KV1 [J]	KV2 [J]	KV3 [J]	Medie KV / Average KV
1	73172	S355J2+M	IPE240	1	0.368	12100	-0 / +100	412	536	29,0	300/7,5	-20	120,0	120,0	116,0	118,7
2	73171	S355J2+M	IPE240	15	5.523	12100	-0 / +100	376	509	29,0	300/7,5	-20	116,0	120,0	112,0	116,0
3	73137	S355J2+M	IPE240	8	2.950	12100	-0 / +100	396	517	27,0	300/7,5	-20	120,0	126,0	130,0	125,3
4	73136	S355J2+M	IPE240	34	12.519	12100	-0 / +100	383	508	30,0	300/7,5	-20	116,0	112,0	124,0	117,3

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

Nr.crt / No Item	Nr.Sarja / Heat No	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	Ti	V	Al	Sn	B	Nb	N	O(ppm)	H(ppm)	CEV
1	73172	0,130	1,190	0,220	0,004	0,019	0,120	0,100	0,330	0,020	0,001	0,050	0,030	0,016	0,0003	0,0016	0,0088			0,395
2	73171	0,120	1,150	0,220	0,008	0,013	0,100	0,100	0,340	0,030	0,001	0,045	0,027	0,014	0,0004	0,0014	0,0090			0,376
3	73137	0,120	1,190	0,230	0,004	0,013	0,060	0,090	0,270	0,020	0,001	0,044	0,034	0,013	0,0003	0,0013	0,0088			0,367
4	73136	0,120	1,190	0,230	0,008	0,025	0,060	0,090	0,310	0,020	0,001	0,046	0,030	0,014	0,0003	0,0011	0,0080			0,370

We hereby declare that the invoiced goods are processed without incorporating iron and steel products originating in Russia or Belarus and thatthe invoiced goods are in conformity with the EU Regulation no. 833/2014 of July 2014 and all further amendments accordingly.

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte oţel-beton/Metalic structures and/or mixed structures steel-concrete
Durabilitate/Durability: Compozitie chimica / Chemical analysis
Sudabilitate/Weldability: CEV
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined
Marcaj/Marked: **SR EN 10025-1:2005 (EN 10025-1:2004)**
Suprafata/Surface: **SR EN 10163-3:2005, clasa C, subcl.1 (EN 10163-3:2004)**
Dimensiuni/Dimension: **SR EN 10365/2017; EN 10365/2017**
Tol. la dim. si forma / Tolerances on dimension and shape: **SR EN 10034/1995; EN 10034/1993**

Materialul mai sus mentionat nu prezinta radioactivitate
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:
Victor Dorin Suciu

CE
12/1823

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

A05

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202018
PLACCA/COLATA: 80174

Mill Test Certificate Nr X 5019559

Delivery note number 5019559 from 13 January 2024 A03

A08 Our reference : 1100685381

A07 Your reference : OSC2361516
27.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000001	HE 340 A	15.100 mm	9,510 to	80174	9,510 to		6

Heat nr B07		Heat analysis (%)															
		C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
	Min					**0,14**												**0,020**
	Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,220**			**0,45**	**100,0**
80174		0,07	0,71	0,020	0,014	0,17	0,009	0,004	0,35	0,14	0,11	0,034	0,002	0,040	0,001	0,0005	0,26	0,023

Heat nr		Tensile test			Charpy impact test							
		N/mm2	N/mm2	5,65VS	C40 KV			UNAGED			J	
		ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07		C11	C12	C13	C01	C02	C41	C03	C42			C43
	Min	**345**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
	Max		**630**									
80174		466	555	22,23	FL.1/3	L		-20	259	250	185	231

Z05

Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
3213/ 3402

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 5019559

Delivery note number 5019559 from 13 January 2024 A03

A08 Our reference : 1100685381

A07 Your reference : OSC2361516
27.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1
3214/ 3402

EN 10168:2004

A01

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

DUFERCO TRAVI E PROFILATI S.p.A.
SOCIETÀ A SOCIO UNICO
SEDE LEGALE ED AMMINISTRATIVA
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)
TEL 03021691 – FAX (Dir) 0302667598 (Amm) 0302169254
PARTITA IVA IT 03386150175
CODICE FISCALE 01711290062
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062
CAPITALE SOCIALE € 154.505.000,00 I.V.
STABILIMENTO DI GIAMMORO
98040 GIAMMORO (ME) ZONA INDUSTRIALE
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 3356 2023 **del** 12/06/23

Pag. 1

Your Ref.: OSC2360648 / 27/04/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE SPA

VIA A.RIGHI 7

37135 VERONA(VR)

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202018
PLACCA/COLATA: 139893A

000992

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE GA/3356

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*									
B07 Colata - Lotto / *Heat - Item*	(*)	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
HEB 240		S275J0 +AR	2	15,10	0,15	0,54	0,16	0,012	0,0070	0,005	0,436	0,008	0,311
EN 10365		EN10025-2/EN10034	8	9.978	0,099	0,188	0,041	0,001		0,022			
No. 139870A	G	OSC2360647		43/000855	319	470	33	10,0	98,0	93,0	101,0	97,3	0
HEA 280		S355J2 +AR	1	15,10	0,15	1,26	0,21	0,015	0,0120	0,034	0,310	0,009	0,429
EN 10365		EN 10025-2/EN10034	6	6.872	0,125	0,192	0,043	0,003	0,001	0,029	0,025	0,0003	
No. 139397B	G	OSC2360648		43/000856	365	517	31	10,0	197,0	195,0	203,0	198,3	- 20
HEA 340		S355J2 +AR	2	15,10	0,16	1,31	0,21	0,015	0,0030	0,025	0,354	0,009	0,439
EN 10365		EN 10025-2/EN10034	8	12.590	0,085	0,160	0,032	0,003	0,002	0,021	0,021	0,0004	
No. 139893A	G	OSC2360630		43/000828	364	529	34	10,0	202,0	180,0	198,0	193,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore G Duferco TRAVI E PROFILATI 3215/ 3402

Quality Manager
Daniele Lombardo

Duferco TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DUFERCO TRAVI E PROFILATI S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

02 N° 2023 DDT / GA/3356

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S275 qualità: JR, J0, J2.
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S275 quality: JR, J0, J2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats*: larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003 EN 10060: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm. - Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S275JR/J0/J2	≥ 275	≥ 265	≥ 255	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S275JR/J0/J2	410 ÷ 560			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S275JR/J0	≥ 23		≥ 22	
	S275J2	≥ 21		≥ 20	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S275JR	20		27	
	S275J0	0		27	
	S275J2	- 20		27	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	> 40 ÷ ≤ 150	
	S275JR/J0/J2	0,41		0,43	
Durabilità / *Durability*	**S275JR/J0/J2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

02 N° 2023 **GA/3356**

DUFERCO TRAVI E PROFILATI S.p.A.

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

DICHIARAZIONE DI PRESTAZIONE
DECLARATION OF PERFORMANCE

03 N° 2023 DDT / GA/3356

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
Tipo: S355 qualità: JR, J0, J2, K2
Grade, quality: hot rolled product in agreement with EN10025-2:2004.
Grade: S355 quality: JR, J0, J2, K2

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.
Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
Name and address of the manufacturer:

DUFERCO TRAVI E PROFILATI S.p.A., stabilimento di Giammoro
Zona Industriale Giammoro
98042 Pace del Mela (ME), Italia
Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
System of assessment and verification of constancy of performance of the construction product:

2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:
Notified body that issued the certificate of conformity of the factory production control:

N° 1608 IGQ

7. Prestazione dichiarata / *Declared performance*

Caratteristiche essenziali *Essential characteristics*	**Prestazione** *Performance*				**Norma armonizzata** *Harmonized standard*
Tolleranze dimensionali e di forma / *Tolerances on dimensions and shape*	EN10034 : 1993	- Travi / *Sections* HEA/B/M: 80 ÷ 500.			EN 10025-1:2004
	EN10034 : 1993	- Travi / *Sections* I: IPE80 ÷ IPE550.			
	EN10024 : 1995	- Travi / *Sections* IPN: 80 ÷ 400.			
	EN10279 : 2000	- Travi ad U ed UPN / *U and UPN sections*: 30 ÷ 120 mm.			
	EN10056-2 : 1993	- Angolari ad ali uguali e disuguali / *Equal and unequal leg angles*: larghezza / *width* 30 ÷ 80, spessore sino a / *thickness up to* 12 mm.			
	EU91 : 1981 / DIN59200 : 2001	- Larghi piatti / *wide flats:* larghezza / *width* 30 ÷ 550 mm, spessore / *thickness* 5 ÷ 40 mm.			
	BS4-1 : 2005	- Profilati secondo BS con spessori di ala sino a / *British universal beams and columns with flange thickness up to* 12 mm.			
	EN 10059: 2003	- Quadri in barre / *Square bars*: 10 ÷ 50 mm.			
	EN 10060: 2003	- Tondi in barre / *Round bars*: 12 ÷ 50 mm.			
Carico di Snervamento / *Yield strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 16	> 16 ÷ ≤ 40	> 40 ÷ ≤ 63	
	S355JR/J0/J2/K2	≥ 355	≥ 345	≥ 335	
Carico di rottura / *Tensile strength (MPa)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 100			
	S355JR/J0/J2/K2	470 ÷ 630			
Allungamento / *Elongation (%)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≥ 3 ÷ ≤ 40		> 40 ÷ ≤ 63	
	S355JR/J0/J2	≥ 22		≥ 21	
	S355K2	≥ 20		≥ 19	
Resilienza / *Impact strength (J)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm) ≤ 150			
		Temperatura /*Temperature* (°C)		KV min	
	S355JR	20		27	
	S355J0	0		27	
	S355J2	- 20		27	
	S355K2	- 20		40	
Saldabilità / *Weldability (CEV% max)*	Tipo / qualità *Grade / quality*	Spessore nominale / *Nominal thickness* (mm)			
		≤ 30	> 30 ÷ ≤ 40	>40 ÷ ≤ 150	
	S355JR/J0/J2/K2	0,46	0,48		
Durabilità / *Durability*	**S355JR/J0/J2/K2**	NPD			

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document.
This declaration of performance is issued under the sole responsibility of the manufacturer identified above.

Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufacturer by:*

Giuliano Bo , direttore di stabilimento / *Plant manager*

Pace del Mela, **19/01/21**



Duferco
TRAVI E PROFILATI

AZIENDA CERTIFICATA UNI EN ISO 9001:2015

CE

1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME) Italia

09

1608 CPR P089

EN 10025-1:2004

S355J2 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel.

Tollerance / *Tolerances* Carico di snervamento / *Yeld strength* Carico di rottura / *Tensile strength* Allungamento / *Elongation* Resilienza / *Impact strength* Saldabilità / *Weldability*	:	Espressamente indicati nella DoP *Espressly indicated in the DoP*

Durabilità / *Durability:* NPD

03 N° 2023 **GA/3356**

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI PALLANZENO - VIA SEMPIONE, 7 28884 PALLANZENO (VB)

CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A02 **Normativa** EN 10204 3.1:2004

A03 **Numero:** 9172 2023 **del** 18/10/23

Pag. 1

Your Ref.: OSC2361407 16-1817 / 9/10/23

A06 ***CUSTOMER:***

DUFERCO TRAVI E PROFILATI S.P.A.

VIA A.DIAZ 248

25010 S.ZENO NAVIGLIO(BS)

000659

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202018
PLACCA/COLATA: 141185B

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE PA/9172

B01 Prodotto e Dimensioni / *Product and Dimension* | B11 | B02 Qualità acciaio / *Steel Grade* | B08 N. Fasci / *Number of Bundles* | B10 Lunghezza / *Lenght (m)*

Norma del prodotto / *Standard product* | Norma qualità / *Standard quality* | B08 N. Barre / *Number of Pieces* | B13 Quantità / *Mass (Kg)*

B07 Colata - Lotto / *Heat - Item* | A07 Ordine cliente N. / *Customer's order N.* | A08 Nostro ordine N. / *Our Order N.*

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

	(*)				C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
					C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	
					C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)* C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
HEB 180		S355J2 +AR		1	12,10	0,14	1,47	0,22	0,013	0,0120	0,027	0,358	0,010	0,459
EN 10365		EN 10025-2/EN10034:1		9	5.577	0,099	0,153	0,024	0,031	0,004	0,034	0,002		
No. 141321A	P	OSC2361321 16-1728			43/004024	448	586	28	10,0	42,0	42,0	40,0	41,3	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184A	P	OSC2361317 16-172			43/003998	397	564	25	7,5	69,0	87,0	83,0	79,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,29	0,22	0,017	0,0040	0,024	0,375	0,009	0,429
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,156	0,182	0,030	0,030	0,002	0,023	0,002		
No. 141184B	P	OSC2361407 16-18			43/004230	430	589	31	7,5	57,0	56,0	69,0	60,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,13	1,27	0,20	0,016	0,0040	0,025	0,336	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,146	0,195	0,033	0,032	0,002	0,020	0,002		
No. 141185B	P	OSC2361407 16-18			43/004230	386	559	27	7,5	56,0	75,0	72,0	67,7	- 20
IPE 240		S355J2 +AR		1	10,10	0,12	1,32	0,21	0,017	0,0040	0,030	0,344	0,009	0,424
EN 10365		EN 10025-2/EN10034:1		12	3.722	0,133	0,196	0,034	0,029	0,002	0,024	0,002		
No. 141186A	P	OSC2361407 16-18			43/004230	409	570	29	7,5	43,0	44,0	44,0	43,7	- 20
IPE 240		S355J2 +AR		2	12,10	0,14	1,28	0,20	0,014	0,0050	0,028	0,335	0,009	0,428
EN 10365		EN 10025-2/EN10034:1		24	8.915	0,129	0,194	0,034	0,031	0,002	0,022	0,002		
No. 141187	P	OSC2361317 16-172			43/003998	422	564	27	7,5	43,0	72,0	60,0	58,3	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
G = Giammoro (ME)
P = Pallanzeno (VB)

Marchio del produttore
P Duferco TRAVI E PROFILATI

T.P.P. s.r.
Andrea Valmaggia

3220/3402

TRAVI E PROFILATI DI PALLANZENO S.p.A.

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE
03 N° 2023 DDT / PA/9172

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Via Sempione 7
   28884 Pallanzeno (VB), Italia
   Tel. +3903245011 - fax +39032452705

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 200. HEM 100*		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE300.		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 240.		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 300 mm.*		
	EN10056-2 : 1993	--Angolari a lati uguali e disuguali con spessori sino a; / *equal and unequal angle up to: 35 mm*		
	EU91 :1982/ DIN59200:2001	- Larghi piatti in larghezza / *wide flat width 160 to 400 mm, thickness up to 40 mm.*		
	BS04 : 2005	-Profilati secondo BS con spessori di ala sino / *British universal beams and columns with flange thickness up to* 12 mm		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Massimo Lama, direttore di stabilimento/ Plant manager

Pallanzeno, 26/01/22

03 N° 2023 DDT / PA/9172

3221/ 3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno S.p.A. via Sempione 7 - 28884 (VB), Italia

14

1608 CPR P166

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2023 DDT / PA/9172

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202018
PLACCA/COLATA: CE249087

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04066357
(B61-31BAL2)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202292314
Order number : 10840686
Your order : OSC2361782

		CHEMICAL ANALYSIS															MECHANICAL PROPERTIES		
Material (L=Lenght)	Heat Number	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	W	AL	N	Ti	CEV	Yield Str.	Ten-sile Str.	Elong. L0= 5,65VSo
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	%
S 355 J2 +M IPE240 L.12.1M	CE249087	0,100	1,150	0,180	0,024	0,029	0,140	0,130	0,380	0,018	0,029	0,005	0,001	0,0122	0,001	0,360	397	532	28,0
S 355 J2 +M IPE240 L.12.1M	CE623350	0,140	1,140	0,160	0,018	0,021	0,140	0,120	0,410	0,018	0,029	0,007	0,002	0,0113	0,001	0,401	386	522	28,0

-Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
-Surface conditions class C1 as per EN 10163-3.
-Intended use: construction and civil engineering.
-Durability: not determined.
-Regulated substances: not determined

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
CELSA
CASTELLBISBAL

Hot rolled products of structural steels.
We hereby certify that the delivered material complies with the terms of the order.

Castellbisbal,23.01.2024
Juan Diego Martínez Gálvez
Quality Control Manager

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L.
OFICINAS: c/Ferralla,12 Pol.Ind. "SAN VICENTE"
08755 Castellbisbal (BARCELONA) Spain
NIF: B-59/559351 Sociedad Unipersonal
Teléfono: +34 93 773 04 00 - Fax: +34 93 772 02 76
Calidad: +34 93 817 66 84 - Fax: +34 93 773 05 52

CELSA GROUP

CELSA BARCELONA

Sostenibilidad Siderúrgica
Gestión RSE
SGSS – 001/2010

CE
0099
06
CELSA01BCN

MILL INSPECTION CERTIFICATE
EN 10.204:2004, Type 3.1.

Standard: EN 10025-1,2/2004-2019
Type: S 355 J2 +M
St. Mea.: EN 10365/2017
St. Tol.: EN 10034/93
Our Ref: 04066357
(B61-31BRESI)

Customer: MANNISIPRE SPA
Via Augusto Righi 7
37135 VERONA
Italy

Destination: MANNI SIPRE SPA
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

Document n°: 202292314
Order number : 10840686
Your order : OSC2361782

		MECH. PROPERTIES				
Material (L=Lenght)	Heat Number	Impact Test 1 J	Impact Test 2 J	Impact Test 3 J	Imp. Test Avg. J	Tp Imp. Test °C
S 355 J2 +M IPE240 L.12.1M	CE249087	83	52	57	64	-20
S 355 J2 +M IPE240 L.12.1M	CE623350	140	110	116	122	-20

Type sample for Impact Test: Direct or transformed data to KV 550/10.

COMPAÑIA ESPAÑOLA DE LAMINACION, S.L. CELSA CASTELLBISBAL

Castellbisbal,23.01.2024
Juan Diego Martínez Gálvez
Quality Control Manager

Cia. Española de Laminación, S.L.
Carrer de la Ferralla, 12Pol. Ind. San Vicente
Castellbisbal-Barcelona,Spain

Anexo al Certificado / Certificate annex

Documento de referencia / Reference document:
Pedido / PO Number: **10840686**
Entrega / Delivery: **202292314**
Referencia / Reference:

Por el presente certificamos que el material entregado cumple con los términos del pedido y es conforme con el Reglamento (UE) Nº 833/2014 de 31 de julio de 2014 relativo a medidas restrictivas motivadas por acciones de Rusia que desestabilizan la situación en Ucrania y con todas sus posteriores actualizaciones.

We hereby certify that the delivered material complies with the terms of the order and are in conformity with the EU Regulation nº 833/2014 and all further amendments accordingly of 31 July 2014 concerning restrictive measures in view of Russia's actions desestabilising the situation in Ukraine.

Modo de producción - Steel making

Acería de horno eléctrico de arco - Electric arc meltshop:
Cia. Española de Laminación, S.L. - España

Laminación en caliente / Frío - Hot/Cold Rolling Mill:
Cia. Española de Laminación, S.L. - España

Códigos arancelarios de los productos relacionados en este documento /Related products HS Codes:
72163291,72163390

ALBARÁN DE SUMINISTRO

EJEMPLAR PARA ENTREGAR A BÁSCULA FIRMADO POR EL TRANSPORTISTA

COPY TO DELIVER AT THE WEIGHBRIDGE SIGNED BY THE CARRIER

CELSA GROUP CELSA BARCELONA

Producto en posesión de la marca EMC

COMPAÑÍA ESPAÑOLA DE LAMINACIÓN, S.L.
oficinas: P.I. San Vicente, s/n - 08755 Castellbisbal - BARCELONA
Dirección postal: Apartado nº 4 - 08740 San Andrés de la Barca - BARCELONA
Tel. Dpto.Comercial: 93 773 05 00 E-mail: sales@gcelsa.com

FECHA DE CARGA: DATE OF LOADING:	Nº ALBARÁN: DELIVERY NOTE NUMBER:
23.01.2024	PE4 202292314
	Castellbisbal NIF:ESB59559351

NOMBRE Y DIRECCION DE ENTREGA / DELIVERY ADDRESS:
MANNI SIPRE SPA Tel:(39)045 6339535
VIA SCOPA, 20 - DIV. 6
63076 MONTEPRANDONE
Italy

DATOS TRANSPORTISTA / CARRIER DATA: NIF: B67472951
elina trans
BARCELONA
BARCELONA
ESPAÑA

ORDEN SUMINISTRO / ORDER NUMBER	NÚMERO PAQUETE / BUNDLE NUMBER	CÓDIGO / CODE NUMBER	Nº PZAS / Nº OF PCS	DENOMINACIÓN / DESCRIPTION	TIPO Y GRADO DE ACERO / STEEL TYPE AND GRADE	COLADA / CAST NUMBER	PESO / WEIGHT
10832525				Su pedido: OSC2361458			
	9402449511	BATM-360X13.3	3	S 355 J2 + M HEA360 L.13.3 M		CE248709	4.356 KG
10840686				Su pedido: OSC2361782			
	9402459189	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.519 KG
	9402459188	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.479 KG
	9402459187	BETM-240X12.1	15	S355J2 + M IPE240 L.12.1M		CE249087	5.469 KG
	9402434998	BETM-240X12.1	8	S355J2 + M IPE240 L.12.1M		CE623350	2.917 KG
TOTAL			56				23.740 KG

■ Cita Cliente: Imprescindible confirmar
Lunes-Jueves: 08:00-12:00/14:00-16:00 Viernes: 08:00-12:00/14:00-16:00

CONTACTO / CONTACT:
manuela.bruni@mannigroup.com
Manuela Bruni
(39)073 571051

Nº TRANSPORTE: 6001415192 / 850340

TRANSPORTISTA / CARRIER: LKW WALTER INTERNATIONAL
ZELLERSTRASSE 1
6330 A-6330 KUFSTEIN
AUSTRIA

MATRÍCULA / VEHICLE REG. NUMBER: 4061GBC / HROXS261

CLIENTE / CUSTOMER: 1670285

Company MANNISIPRE SPA
Via Augusto Righi 7
I-37135 VERONA VR

FECHA DE CARGA / Date of loading:			TRANSPORTISTA / Carrier:	
DÍA day	MES month	AÑO year	NIF Y FIRMA NIF and Signature	SELLO Stamp
23	01	2024	X4287972J	

Nota importante: Salvo acuerdo, la factura de transporte sólo se hará efectiva si el ALBARÁN DEL MATERIAL es adjuntado debidamente fechado y firmado por el cliente, con el nombre de la persona que firma y a su vez consta el número de albarán en ella.Important Remark: Unless other agreement, the transport invoice will be accepted ONLY IF THE MATERIAL DELIVERY NOTE is attached and correctly signed and dated with the name of the person who signs and with the delivery ticket number in it.

Atención: Los atados son para conformar el paquete. NO PUEDEN SER UTILIZADOS COMO PUNTOS DE ENGANCHE. El fabricante no se hace responsable de los daños ocasionados por una indebida

Product Producer Registration No.: ENV/2023/000005949

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 “Esecuzione di strutture di acciaio e di alluminio”
- Harmonised standard norm EN 1090-1:2009 + A1:2011 “Execution of steel structures and aluminium structures”

- Si dichiara inoltre che l’organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l’ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE
24
0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

01/03/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Montepradone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400067

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. PO

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani 19.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI SIPRE
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000459242-1724000079 1 LOTTO.-0001100432

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000459242

ordine cliente:
customer order: 1724000079 1 LOTTO.

documento di trasporto:
document of trasport DDT 0001100432

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
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10098 Rivoli (TO) | ITALY | Strada Settima, 5
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- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

19/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
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T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 61849

ArcelorMittal

ARCELORMITTAL COMMERCIAL ITALY SRL,
VIALE BRENTA 27/29
IT - 20139 MILANO

Plant:
ArcelorMittal Belval & Differdange
Site de Differdange - Train Grey
L-4503 DIFFERDANGE

Delivery Note Nr 4828653

2 April 2023

Our reference: 1100667170
Your reference: NR. 4000001541
14 February 2023
Quotation reference: 097474

Shipping point: PAEB railway
Country of destination: Italy
Country of final dest.: Italy
Country of origin: Luxembourg

Sold-to party
METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
VIA AUGUSTO RIGHI 7
I-37135 VERONA VR

Ship-to party
METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
INTERPORTO SITO STRADA SETTIMA 5
I-10090 RIVOLI(TO)

Destination
RIVOLI (TORINO)

Road description
Receiver : Eredi TAMAGNONE snc / VIA BUFFA 90
: 10042 NICHELINO (Torino) - Italy
Via : WASSERBILLIG/IGEL-GR. - Germany
Station : TORINO ORBASSANO

MPL
DDT IN
0800007875

Transport : 3514188 318235172166 42,822 To

Itm.	Delivery	Product	Size / Length	Bund. Bars	ID Bar	Heat nr	Weight in To
002	6008928586	Europ. wide fl.beams HE 340 A					
			16.100 mm	1	A1423078710	1/61850	1,688
			16.100 mm	1	A1423078709	1/61850	1,688
			16.100 mm	1	A1423078717	1/61850	1,688
			16.100 mm	1	A1423078716	1/61850	1,688
			16.100 mm	1	A1423078715	1/61850	1,688
			16.100 mm	1	A1423078714	1/61850	1,688
			16.100 mm	1	A1423078711	1/61850	1,688
			16.100 mm	1	A1423078712	1/61850	1,688
			16.100 mm	1	A1423078708	1/61850	1,688
			16.100 mm	1	A1423078707	1/61850	1,688
			16.100 mm	1	A1423078706	1/61850	1,688
			16.100 mm	1	A1423078705	1/61850	1,688
			16.100 mm	1	A1423078713	1/61850	1,688

5-1507562

ArcelorMittal

ARCELORMITTAL COMMERCIAL ITALY SRL,
VIALE BRENTA 27/29
IT - 20139 MILANO

Plant:
ArcelorMittal Belval & Differdange
Site de Differdange - Train Grey
L-4503 DIFFERDANGE

Delivery Note Nr 4828653

2 April 2023

Our reference: 1100667170
Your reference: NR. 4000001541
14 February 2023
Quotation reference: 097474

Ship-to party

METALLURGICA PIEMONTESE
I-10090 RIVOLI(TO)

Itm.	Delivery	Product	Size / Length	Bund. Bars	ID Bar	Heat nr	Weight in To
003	6008928587	Europ. wide fl.beams HE 340 A					
			18.100 mm	1	A1423078720	1/61850	1,898
			18.100 mm	1	A1423078719	1/61850	1,898
			18.100 mm	1	A1423078722	1/61850	1,898
			18.100 mm	1	A1423078721	1/61850	1,898
			18.100 mm	1	A1423078728	1/61850	1,898
			18.100 mm	1	A1423078718	1/61850	1,898
			18.100 mm	1	A1423078727	1/61849	1,898
			18.100 mm	1	A1423078726	1/61850	1,898
			18.100 mm	1	A1423078725	1/61850	1,898
			18.100 mm	1	A1423078724	1/61850	1,898
			18.100 mm	1	A1423078723	1/61850	1,898

002 = 13 PCE 21,944 To
003 = 11 PCE 20,878 To

General remarks
Quality : S355J2+M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

Remarks about prices: Price is to be understood net
Rolling margins: Rolling margins according to EN 10034

Incoterms: CIP RIVOLI (TORINO) Ship.type: LF Warehouse: 1000	Total Bundles	Total Pieces	Total Weight in To
		24	42,822

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate Nr X 4828653

Delivery note number 4828653 from 2 April 2023 A03

A08 Our reference : 1100667170
A07 Your reference : NR. 4000001541
14.02.2023
METALLURGICA PIEMONTESE

S355J2+M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
VIA AUGUSTO RIGHI 7
I-37135 VERONA VR
A06

Ord.item	B01 Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	HE 340 A	16.100 mm	21,944 to	61850	21,944 to		13
000003	HE 340 A	18.100 mm	20,878 to	61849	1,898 to		1
				61850	18,980 to		10

Heat nr B07		Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
	Min					0,14											
	Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45
61849		0,06	0,89	0,018	0,021	0,19	0,011	0,002	0,30	0,18	0,09	0,034	0,008	0,050	0,001	0,0004	0,28
61850		0,06	0,87	0,020	0,014	0,19	0,010	0,003	0,27	0,15	0,12	0,033	0,007	0,040	0,001	0,0004	0,27

Heat nr		Tensile test			Charpy impact test							
		N/mm2	N/mm2	S,65VS	C40 KV			UNAGED			J	
		ReH	Rm	A(%)	Position		mm	°C	1	2	3	M
B07		C11	C12	C13	C01	C02	C41	C03	C42			C43
	Min	345	470	22,00	FL.1/3	L		-20		19		27
	Max		630									
61849		442	511	28,09	FL.1/3	L		-20	196	216	195	202
61850		431	513	28,54	FL.1/3	L		-20	242	250	238	243

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

Mill Test Certificate Nr X 4828653

Delivery note number 4828653 from 2 April 2023 A03

A08 Our reference : 1100667170

A07 Your reference : NR. 4000001541
14.02.2023
METALLURGICA PIEMONTESE

S355J2 + M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
VIA AUGUSTO RIGHI 7
I-37135 VERONA VR

A06

Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0759 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

EN 10168:2004

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 65219

CSN
Companhia Siderúrgica Nacional

SW THÜRINGEN

Stahlwerk Thüringen GmbH · Kronacher Straße 6 · 07333 Unterwellenborn · Deutschland

Consignee

Metallurgica Piemontese Lavorazioni
Interporto Sito Nord
str. Settima 5
I-10098 RIVOLI

Contact Carolin Baunack
Fax 036714550-7013
Phone +4936714550-6013
e-mail carolin.baunack@stahlwerk-thueringen.d

Unterwellenborn, Dec 30, 2022

Advice 800135413

Client

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 VERONA

Dispatch date:	Dec 30, 2022	Date of Order	Nov 30, 2022
Delivery Note:	500012422	**Order No.**	**20023963**
Means of Transport:	3180-3908-338-7	**Your Order No.**	**4000001467**
		Customer No.	10185

Material	Length	Heat No.	Bundles	Pieces/ Bundle	Weight
HE340A_S355J2+M	18.100 mm	56306	1	2	3,790 KG
		56306	1	1	1,895 KG
		65219	1	2	3,765 KG
		65221	1	2	3,770 KG
		65223	1	2	3,770 KG
		65223	1	1	1,890 KG
Item: 000003					
Item total			6	10	18,880 KG
Total			**6**	**10**	**18,880 KG**

5 01447256 4

MPL
DDT IN
0800007159

Stahlwerk Thüringen GmbH
Kronacher Straße 6
07333 Unterwellenborn
Germany

phone: +49 3671 4550 0
fax +49 3671 4550 7107
mail info@stahlwerk-thueringen.de
Web www.stahlwerk-thueringen.de

CEO:
Carla Lorenzo Cardoso
Luis Fernando Martinez Ferreira
Chairman of the Supervisory Board:
Volker Schulze

HR B 202 875
District court Jena,
Register court
VAT number: DE 150 536 120
tax number: 161/120/04231
EORI Nr.: 2950006

Commerzbank AG
IBAN: DE44 8208 0000 0620 0102 00
BIC: DRESDEFF827
Kreissparkasse Saalfelt-Rudolstadt
IBAN: DE35 8305 0303 0000 0116 73
BIC: HELADEF1SAR

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023963
A07 Your Order No.: 4000001467

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1407/12-2022**
Advice No. 800135413

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
3	56306	HE 340A	EN 10365	18.100 mm	3	5.685 kg
3	65219	HE 340A	EN 10365	18.100 mm	2	3.765 kg
3	65221	HE 340A	EN 10365	18.100 mm	2	3.770 kg
3	65223	HE 340A	EN 10365	18.100 mm	3	5.660 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
56306	0,09	0,22	1,41	0,018	0,017	0,007	0,018	0,039	0,007	0,09
65219	0,08	0,18	1,44	0,018	0,019	0,011	0,014	0,040	0,007	0,07
65221	0,08	0,18	1,44	0,010	0,009	0,008	0,016	0,040	0,007	0,04
65223	0,08	0,18	1,44	0,010	0,009	0,008	0,016	0,040	0,007	0,04

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
56306	0,34	0,16	0,03	0,022	0,38
65219	0,32	0,13	0,03	0,023	0,37
65221	0,22	0,11	0,02	0,019	0,36
65223	0,22	0,11	0,02	0,019	0,36

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_o}$ [%] C13	C14
max		630		
min	345	470	22,0	
56306	428	536	30,0	

Z03 Works inspector
René Merbach

Z02 30.12.2022

Z04

CE

0769
22

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023963
A07 Your Order No.: 4000001467

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1407/12-2022**
Advice No. 800135413

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_0}$ [%] C13	C14
max		630		
min	345	470	22,0	
65219	409	511	33,0	
65221	410	509	30,0	
65223	426	529	30,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
56306	KV 450	L	-20 °C	19 / 27	150	151	159	153
65219	KV 450	L	-20 °C	19 / 27	125	147	134	135
65221	KV 450	L	-20 °C	19 / 27	164	133	153	150
65223	KV 450	L	-20 °C	19 / 27	156	157	150	154

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034

Z03 Works inspector
René Merbach

Z02 30.12.2022

Z04

CE

0769
22

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20023963
A07 Your Order No.: 4000001467

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 1407/12-2022**
Advice No. 800135413

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 30.12.2022

Z04

CE

0769
22

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

Stahlwerk Thüringen GmbH
Kronacher Straße 6
D-07333 Unterwellenborn
E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

Notified factory production control certification body No. 0769

KIT Karlsruher Institut für Technologie
Versuchsanstalt für Stahl, Holz und Steine
Otto-Ammann-Platz 7
D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderurgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A.

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3240/ 3402

Stahlwerk Thüringen GmbH

07333 Unterwellenborn (Thüringen)

Unterwel

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 00011100432
PLACCA/COLATA: 65218

Ladezettel KOEN-TE 6100013316

Warenempfänger:
Metallurgica Piemontese Lavorazioni
str. Settima 5
I-10098 RIVOLI

Auftraggeber:
Metallurgica Piemontese
Via Augusto Righi 7
I-37135 VERONA

LKW-Nr.: NR 325MJ Auflieger-Nr.: RO JD 158
Eigengewicht: 15.300 KG
Lastgrenze: 40.000 KG

Unsere Nummer: 2002 3964 1 Ihre Nummer: 4000001466
Bestellung:
Profil: HE 340A Kai-Nummer:
Stahlmarke: S275J0+M Abladestelle: 5a443263

Länge	Charge	Paket-Nr.	Wiege-Nr.	Stück	Versandgewicht [kg]	reelles Gewicht [kg]
11.100	65228	CB794391	3191	4	4.620	4.620
Summe Position:		**Anzahl Pakete**	**1**	**4**	**4.620**	**4.620**

Unsere Nummer: 2002 4112 6 Ihre Nummer: MPL 4000001484
Bestellung:
Profil: HE 340A Kai-Nummer:
Stahlmarke: S355J2+M Abladestelle:

Länge	Charge	Paket-Nr.	Wiege-Nr.	Stück	Versandgewicht [kg]	reelles Gewicht [kg]
12.100	65218	CB794362	3162	3	3.780	3.780
12.100	65218	CB794361	3161	3	3.780	3.780
12.100	65218	CB794360	3160	3	3.785	3.785
12.100	65218	CB794359	3159	3	3.790	3.790
12.100	65218	CB794358	3158	3	3.795	3.795
Summe Position:		**Anzahl Pakete**	**5**	**15**	**18.930**	**18.930**
Summe Gesamt:		**Anzahl Pakete**	**6**	**19**	**23.550**	**23.550**

Die Gewichtswerte aus der geeichten Waage können eingesehen werden

Paletten/Harte Hölzer/Weiche Hölzer/Schwellen/T-Stücke/Europaletten/weich lang 1,5: 0 /12 /0 /0 /0 /0 /0
Gurte (1-/2-teilig): 0 /0
Transportziel: KUNDE
Bemerkungen: 11.01.23
Verlader: PG

MPL
DDT IN
0800007122

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20024112
A07 Your Order No.: MPL 4000001484

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 900/1-2023**
Advice No. 800136345

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
6	65218	HE 340A	EN 10365	12.100 mm	15	18.930 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C76	V C79	Cr C80
max	0,22	0,25	1,60	0,030	0,030					0,29
min		0,14								
65218	0,08	0,19	1,44	0,017	0,022	0,008	0,014	0,040	0,008	0,09

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,48
min					
65218	0,29	0,13	0,04	0,023	0,38

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_o}$ [%] C13	C14
max		630		
min	345	470	22,0	
65218	435	526	31,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
65218	KV 450	L	-20 °C	19 / 27	132	137	124	131

Z03 Works inspector
René Merbach

Z02 12.01.2023

Z04

CE

0769
23
032 CPR 2020-10-01 SWT

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20024112
A07 Your Order No.: MPL 4000001484

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 900/1-2023**
Advice No. 800136345

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT

A04
A06

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 12.01.2023

Z04

CE

0769
23

032 CPR 2020-10-01 SWT

A10 **Sales Agent:**
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**
ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 65136

Mill Test Certificate NrX 4816431

Delivery note number 4816431 from 18 March 2023 A03

A08 Our reference : 1100667169
A07 Your reference : NR. 4000001539
14.02.2023
METALLURGICA PIEMONTESE

METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
VIA AUGUSTO RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

B01 Ord.item	Product	Length	B13 Weight	B07 Heat nr	Weight	Bund.	B08 Bars
000002	IPE 330	20.100 mm	26,082 to	65136	9,660 to		10
				65137	16,422 to		17
000003	IPE 360	20.100 mm	17,972 to	65138	16,849 to		15
				65139	1,123 to		1

Heat analysis (%)

B07 Heat nr	C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV
Min					**0,14**											
Max	**0,20**	**1,60**	**0,030**	**0,030**	**0,25**			**0,55**					**0,110**			**0,45**
65136	0,09	1,14	0,022	0,013	0,17	0,008	0,002	0,38	0,15	0,13	0,004	0,033	0,030	0,019	0,0002	0,35
65137	0,08	1,14	0,018	0,019	0,18	0,010	0,002	0,44	0,18	0,09	0,006	0,035	0,050	0,023	0,0003	0,34
65138	0,08	1,13	0,024	0,017	0,16	0,012	0,002	0,43	0,17	0,11	0,006	0,034	0,040	0,019	0,0003	0,34
65139	0,09	1,16	0,027	0,019	0,16	0,011	0,002	0,42	0,16	0,13	0,007	0,036	0,030	0,018	0,0004	0,36

B07 Heat nr	Tensile test N/mm2 ReH C11	Rm C12	5,65VS A(%) C13	Charpy impact test C40 KV Position C01	C02	mm C41	°C C03	UNAGED 1 C42	2	3	J M C43
Min	**355**	**470**	**22,00**	**FL.1/3**	**L**		**-20**		**19**		**27**
Max		**630**									
65136	407	502	32,88	FL.1/3	L		-20	200	205	199	201
65137	406	498	32,72	FL.1/3	L		-20	204	191	185	193
65138	399	506	30,21	FL.1/3	L		-20	164	156	100	140
65139	396	506	29,81	FL.1/3	L		-20	141	134	149	141

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 06
UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

A10 **Sales Agent:**

ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 **Plant:**

ArcelorMittal Belval & Differdange
Site de Belval
L-4008 Esch/Alzette

A04

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05

Mill Test Certificate NrX 4816431

Delivery note number 4816431 from 18 March 2023 A03

A08 Our reference : 1100667169

A07 Your reference : NR. 4000001539
14.02.2023
METALLURGICA PIEMONTESE

METALLURGICA PIEMONTESE
LAVORAZIONI S.R.L.
VIA AUGUSTO RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles I : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:
https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UKCA 0038 21

Code of the product type: 1.0577 / DOP: AMEB-2/09-CPR-13-1

EN 10168:2004

CSN
Companhia Siderúrgica Nacional

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 65570

SW THÜRINGEN

Stahlwerk Thüringen GmbH · Kronacher Straße 6 · 07333 Unterwellenborn · Deutschland

Consignee

Metallurgica Piemontese Lavorazioni
Interporto Sito Nord
str. Settima 5
I-10098 RIVOLI

Contact	Carolin Baunack
Fax	036714550-7013
Phone	+4936714550-6013
e-mail	carolin.baunack@stahlwerk-thueringen.d

Unterwellenborn, Jan 5, 2023

Advice 800135834

Client

Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 VERONA

Dispatch date:	Jan 5, 2023	Date of Order	Dec 7, 2022
Delivery Note:	500012600	**Order No.**	**20024114**
Means of Transport:	3180-3914-818-0	**Your Order No.**	**MPL 4000001485**
		Customer No.	10185

Material		Length	Heat No.	Bundles	Pieces/ Bundle	Weight
UPN220_S355J2+M		18.100 mm	65570	4	10	21,320 KG
Item:	000013					
Item total				4	40	21,320 KG
Total				**4**	**40**	**21,320 KG**

MPL
DDT IN
0800007129

5a4445695

Seite 1 von 1

Stahlwerk Thüringen GmbH
Kronacher Straße 6
07333 Unterwellenborn
Germany

phone: +49 3671 4550 0
fax +49 3671 4550 7107
mail info@stahlwerk-thueringen.de
Web www.stahlwerk-thueringen.de

CEO:
Carla Lorenzo Cardoso
Luis Fernando Martinez Ferreira
Chairman of the Supervisory Board:
Volker Schulze

HR B 202 875
District court Jena,
Register court
VAT number: DE 150 536 120
tax number: 161/120/04231
EORI Nr.: 2950006

Commerzbank AG
IBAN: DE44 8208 0000 0620 0102 00
BIC: DRESDEFF827
Kreissparkasse Saalfeld-Rudolstadt
IBAN: DE35 8305 0303 0000 0116 73
BIC: HELADEF1SAR

SWT
STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20024114
A07 Your Order No.: MPL 4000001485

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 497/1-2023**
Advice No. 800135834

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

SWT
A04

A06
Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Pos. A10	Heat No. B07	Section B01	According to	Length B09	Pieces B08	Weight B13
13	65570	UPN 220	EN 10365	18.100 mm	40	21.320 kg

Heat Analysis [%]

Heat No. B07	C C71	Si C72	Mn C73	P C74	S C75	N C76	Al C76	Nb C78	V C79	Cr C80
max	0,20	0,25	1,60	0,030	0,030					0,29
min		0,14								
65570	0,11	0,19	1,41	0,025	0,024	0,008	0,018	0,038	0,008	0,08

Heat Analysis [%]

Heat No. B07	Cu C81	Ni C82	Mo C83	Ti C84	CEV C93
max	0,55	0,42	0,11		0,46
min					
65570	0,32	0,13	0,02	0,023	0,40

Tensile test (ISO 6892-1)

Heat No. B07	Yield stress [N/mm2] C11	Tensile strength [N/mm2] C12	Elongation $5.65\sqrt{S_o}$ [%] C13	C14
max		630		
min	355	470	22,0	
65570	417	573	27,0	

Impact test (ISO 148-1)

Heat No. B07	Type/Shape C40/C41	Direction C02	Temperature C03	Requirement 1,2,3/M	1 [J] C42	2 C42	3 C42	M C43
65570	KV 450	L	-20 °C	19 / 27	102	92	116	103

Z03 Works inspector
René Merbach

Z02 06.01.2023

Z04

CE

0769
23

SWT

STAHLWERK THÜRINGEN

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A08 Our Order No.: 20024114
A07 Your Order No.: MPL 4000001485

B02 Quality: S355J2+M
according to: EN 10025-2/2019

A03 **Certificate No. 497/1-2023**
Advice No. 800135834

A02 Inspection Certificate 3.1

according to EN 10204:2004/3.1

A04 SWT

A06
Metallurgica Piemontese
Lavorazioni s.r.l.
Via Augusto Righi 7
I-37135 Verona

Z01

- electric arc melting
- ladle refined, fine grained and fully killed

Material number: 1.0577

Surface condition according to DIN EN 10163-3, class C, subclass 1

Material for galvanization. Si: 0.14% - 0.25%

General technical terms of delivery for hot rolled structural steel products: EN 10025-1
Intended uses: Welded, bolted and riveted structures
Expressed as indicated in the DoP:
Tolerances / Tensile strength / Yield strength / Elongation
Impact strength / Weldability / Durability

Tolerances on dimensions and shape:
HE / IPE / UB / UC / UBP / HP according to EN 10034
UPN / UPE / PFC according to EN 10279

We hereby declare that the products we make were checked for radioactive components and that they are free from radioactive contaminations in compliance with the requirements of the steel construction standard EN 1090-1.

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 06.01.2023

Z04

CE

0769
23

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

DECLARATION OF PERFORMANCE
in acc. with EU-regulation 305/2011, Annex III

No. 032 CPR 2020-10-01 SWT

1. Unique identification code of the product-type:

   Hot rolled constructional steel products: 1.0577

2. Type, batch or serial number or any other element allowing identification of the construction products as required under Article 11(4):

   Section S355J2 according to EN 10025-2

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

   Welded, bolted and riveted structures

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5):

   Stahlwerk Thüringen GmbH
   Kronacher Straße 6
   D-07333 Unterwellenborn
   E-Mail: info@stahlwerk-thueringen.de

5. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:

   System 2+

6. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

   Notified factory production control certification body No. 0769

   KIT Karlsruher Institut für Technologie
   Versuchsanstalt für Stahl, Holz und Steine
   Otto-Ammann-Platz 7
   D-76131 Karlsruhe

performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control and issued the certificate of conformity of the factory production control.

CSN
Companhia Siderúrgica Nacional

SWT STAHLWERK THÜRINGEN

7. Declared performance:

Essential characteristic	Performance				Harmonised technical specification
Tolerances on dimensions	HE / IPE / UB / UC HP / HD / UBP		according to EN 10034:1993		EN 10025-1:2004
	UPN / UPE / PFC		according to EN 10279:2000		
Yield strength	Nominal thickness (mm)		Values		
	>	≤	min (MPa)		
		16	355		
	16	40	345		
Tensile strength	Nominal thickness (mm)		Values		
	≥	≤	min (MPa)	max (MPa)	
	3	100	470	630	
Elongation $L_0 = 5{,}65\sqrt{S_0}$	Nominal thickness (mm)		Values		
	≥	≤	min (%)		
	3	40	22		
Impact strength	Nominal thickness (mm)		Values		
	>	≤	min (J)		
		100	27 at -20°C		
Weldability CEV	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		0,45	
	30	40		0,47	
Durability	Nominal thickness (mm)		Values		
	>	≤		max (%)	
		30		C*: 0,20 Mn: 1,60 P: 0,030 S: 0,030 Si: 0,55	Cu: 0,55 Ni: 0,42 Cr: 0,29 Mo: 0,11
	* For nominal thickness > 30 mm max. 0,22 % C				

8. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 7.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4. Signed for and on behalf of the manufacturer by:

Unterwellenborn, 01th of October 2020

i. A. Wicke

.....

Udo Wicke
Quality Manager
Stahlwerk Thüringen GmbH

3250/ 3402

A01

Duferco TRAVI E PROFILATI

Azienda certificata ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI SAN ZENO NAVIGLIO
VIA A. DIAZ, 248 - 25010 SAN ZENO NAVIGLIO (BS)
TELEFONO +3903021691 - FAX +390302667598

INSPECTION CERTIFICATE

A02 **Normativa** EN 10204:2004 3.1

A03 **Numero:** 249 2024 **del** 5/02/24

Pag. 1

Your Ref.: OSC2470020 / 12/01/24

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE S.P.A. MZ TRAVI OSCAA70

VIA I MAGGIO

37060 MOZZECANE(VR)

000992

MANNI SIPRE STEEL ENGINEERING

UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE

NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 139269

A09 **DdT / *SHIPPING DOCUMENT:*** DDT/DELIVNOTE BA/249

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension*	B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*		Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*		A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
	(*)												
HEA 400		S275J0 +AR	2	18,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365		EN10025-2/EN10034:19	4	9.050	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 140785		OSC2370706		43/00015	320	464	28	10,0	42,0	62,4	41,8	48,8	0
IPE 330		S275J0 +AR	1	20,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365		EN10025-2/EN10034:19	4	3.948	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 143192		OSC2370673		43/00007	336	486	33	7,5	76,5	71,8	81,3	76,5	0
IPE 360		S275J0 +AR	1	18,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365		EN10025-2/EN10034:19	4	4.135	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 142507		OSC2470020		44/00002	339	490	24	10,0	58,1	83,1	91,7	77,6	0
IPE 330		S355J2 +AR	1	20,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365		EN 10025-2/EN10034:1	4	3.948	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 139269		OSC2370674		43/00007	462	571	27	7,5	26,9	28,7	28,0	27,9	- 20
IPE 330		S355J2 +AR	2	20,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365		EN 10025-2/EN10034:1	8	7.896	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 139974		OSC2370674		43/00007	426	557	30	7,5	56,2	53,1	41,5	50,2	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
Z = San Zeno Naviglio (BS)
P = Pallanzeno (VB)

Marchio del produttore Z Duferco TRAVI E PROFILATI

T.P.P. s.p.a.
Samuele Bottari

3251/3402

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE

DECLARED PERFORMANCE

02 N° 2024 DDT / BA/249

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S275 grado: JR,J0,J2.
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S275 grade: JR,J0,J2.

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Stabilimento di San Zeno Naviglio
   Via A.Diaz, 248 – 25010 San Zeno Naviglio (BS)
   Telefono +3903021691 – Fax +390302667598

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to 400 HEM 400*		EN 10025-1:2004
	EN10034 : 1993	-Travi/ *sections I from* IPE100 to IPE 750		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 280		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140 to 400*		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S275JR/J0/J2	275	265	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤100		
	S275JR/J0/J2	410 to 560		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S275JR/J0	23		
	S275J2	21		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S275JR	+20	27	
	S275J0	0	27	
	S275J2	-20	27	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S275JR/J0/J2	0,41	0,41	
Durabilità / *durability*	S275JR/J0/J2	NPD		

· La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
Firmato a nome e per conto del fabbricante /*Signed for and on behalf of the manufactured by:*

Gabriele Comandini direttore di stabilimento/ Plant manager

San Zeno Naviglio 22/11/23

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno Spa Via A. Diaz, 248 - 25010 San Zeno Naviglio BS - IT

23

1608 CPR P239

EN10025-1:2004

S275J0 +AR

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

02 N° 2024 DDT / BA/249

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE

03 N° 2024 DDT / BA/249

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Stabilimento di San Zeno Naviglio
   Via A.Diaz, 248 – 25010 San Zeno Naviglio (BS)
   Telefono +3903021691 – Fax +390302667598

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	**Prestazione / *performance***			**Norma armonizzata/ *Harmonized technical specification***
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to* 400 HEM 400		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE 750		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 280		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140* to 400		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufactured by:*

Gabriele Comandini direttore di stabilimento/ Plant manager

San Zeno Naviglio 22/11/23

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno Spa Via A. Diaz, 248 - 25010 San Zeno Naviglio BS - IT

23

1608 CPR P239

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2024 DDT / BA/249

A01

Duferco TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

SOCIETÀ A SOCIO UNICO
SEDE LEGALE
VIA SEMPIONE, 7 – 28884 PALLANZENO (VB)
TEL. 03245011 – FAX. 032452705
PARTITA IVA IT 01910110038
CODICE FISCALE 01910110038
R.E.A. V.C.O. 191072 – REGISTRO IMPRESE (VB) N. 01910110038
CAPITALE SOCIALE € 30.000.000 I.V.
SEDE AMMINISTRATIVA
VIA A.DIAZ, 248 – 25010 SAN ZENO NAVIGLIO (BS)
STABILIMENTO DI SAN ZENO NAVIGLIO
VIA A. DIAZ, 248 - 25010 SAN ZENO NAVIGLIO (BS)
TELEFONO +3903021691 - FAX +390302667598

INSPECTION CERTIFICATE

A02 **Normativa** EN 10204:2004 3.1

A03 **Numero:** 145 2024 **del** 25/01/24

Pag. 1

Your Ref.: OSC23O0400 / 5/12/23

A06 **CLIENTE / *CUSTOMER:***

MANNISIPRE S.P.A. TO

STR.SETTIMA 5

10098 RIVOLI(TO)

000992

MANNI SIPRE
STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0001100432
PLACCA/COLATA: 139269

A09 **DdT / *SHIPPING DOCUMENT:***

DDT/DELIVNOTE BA/145

ANALISI CHIMICHE / *CHEMICAL COMPOSITION*

C71 C %	C72 Mn %	C73 Si %	C74 P %	C75 S %	C76 Al %	C77 Cu %	C78 N %	C87 CEV
C79 Cr %	C80 Ni %	C81 Mo %	C82 V %	C83 Nb %	C84 Sn %	C85 Ti %	C86 B %	

CARATTERISTICHE MECCANICHE / *MECHANICAL PROPERTIES*

B01 Prodotto e Dimensioni / *Product and Dimension* B11	B02 Qualità acciaio / *Steel Grade*	B08 N. Fasci / *Number of Bundles*	B10 Lunghezza / *Lenght (m)*	C11 Snervamento *Yield point* ReH - N / mm²	C12 Resistenza *Tensile strenght* Rm - N / mm²	C13 Allungamento *Elongation* A%	C40 Prova di Resilienza - *Impact Test KV (J)*					
Norma del prodotto / *Standard product*	Norma qualità / *Standard quality*	B08 N. Barre / *Number of Pieces*	B13 Quantità / *Mass (Kg)*				C41 h (mm)	C42 KV1	C42 KV2	C42 KV3	C43 KVm	C03 Temp. °C
B07 Colata - Lotto / *Heat - Item*	A07 Ordine cliente N. / *Customer's order N.*		A08 Nostro ordine N. / *Our Order N.*									
(*)												
HEB 300	S355J2 +AR	4	18,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365	EN 10025-2/EN10034:1	8	17.478	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 142947	OSC23O0364		43/00000	393	548	32	10,0	58,2	59,4	30,5	49,4	- 20
IPE 330	S355J2 +AR	2	18,10	0,00	0,00	0,00	0,000	0,000	0,000	0,000	0,000	
EN 10365	EN 10025-2/EN10034:1	12	11.002	0,000	0,000	0,000	0,000	0,000	0,000	0,000		
No. 139269	OSC23O0400		43/00006	462	571	27	7,5	26,9	28,7	28,0	27,9	- 20

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile - Durabilità: nessuna prescrizione determinata
Sostanza regolamentata: Nessuna prescrizione determinata - Saldabilità: Secondo EN 1011-2
Si dichiara che i risultati delle prove sono conformi all'ordine.

(*) Stabilimento produttore
Z = San Zeno Naviglio (BS)
P = Pallanzeno (VB)

Marchio del produttore

Z Duferco TRAVI E PROFILATI 3256/3402

T.P.P. s.p.a.
Samuele Bottari

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

DICHIARAZIONE DI PRESTAZIONE
DECLARED PERFORMANCE

03 N° 2024 DDT / BA/145

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004.
   Tipo: S355 grado: JR,J0,J2, K2
   Type, quality: hot rolled product in agreement with EN 10025-2:2004.
   Type: S355 grade: JR,J0,J2, K2

2. Uso previsto del prodotto da costruzione: Prodotti laminati a caldo di acciai per impieghi strutturali.
   Intended use of the construction product: hot rolled products of structural steel.

3. Nome e indirizzo del fabbricante:
   Name and address of the manufacturer:

   Travi e Profilati di Pallanzeno S.p.A.
   Stabilimento di San Zeno Naviglio
   Via A.Diaz, 248 – 25010 San Zeno Naviglio (BS)
   Telefono +3903021691 – Fax +390302667598

4. **NA**

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:
   System of evaluation and verification of constancy of performance of the construction product:
   2+

6a. Norma armonizzata: EN 10025-1:2004
Harmonized standard: EN 10025-1:2004
Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica / *Notified body that issued the certificate of conformity of the factory production control:*

N° 1608 IGQ

7. Prestazione dichiarata / *Declaration performance*

Caratteristiche Essenziali / *Essential caratteristic*	Prestazione / *performance*			Norma armonizzata/ *Harmonized technical specification*
Tolleranze dimensionali e di forma / *tolerances on dimensions and shape*	EN10034 : 1993	-Travi / *sections HEA/B from 100 to* 400 HEM 400		EN 10025-1:2004
	EN10034 : 1993	-Travi/*sections I from* IPE100 to IPE 750		
	EN10024 : 1995	-Travi / *sections* IPN from 160 to 280		
	EN10279 : 2000	-Travi ad U ed UPN/ *U and UPN sections from 140* to 400		
Carico di Snervamento / *yield strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 16	>16 to ≤40	
	S355 JR/J0/J2/K2	355	345	
Carico di rottura / *tensile strength (MPA)*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥03 ≤100		
	S355 JR/J0/J2/K2	470 to 630		
Allungamento / *elongation %*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≥3 ≤ 40		
	S355 JR/J0	22		
	S355 J2	22		
	S355 K2	20		
Resilienza / *impact strength*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 150		
		Temperatura /temperature	KV min (joule)	
	S355 JR	+20	27	
	S355 J0	0	27	
	S355 J2	-20	27	
	S355 K2	-20	40	
Saldabilità / *weldability CEV% max*	Tipo /grado Type /grade	Spessore nominale / *nominal thickness in mm*		
		≤ 30	>30 to ≤ 40	
	S355 JR/J0/J2/K2	0,46	0,48	
Durabilità / *durability*	**S355 JR/J0/J2/K2**	NPD		

- La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.
  Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.
  The performance of the product is in conformity with the declared performance in this document. This declaration of performance is issued under the sole responsibility of the manufacturer mentioned above.
  Firmato a nome e per conto del fabbricante / *Signed for and on behalf of the manufactured by:*

Gabriele Comandini direttore di stabilimento/ Plant manager

San Zeno Naviglio 22/11/23

Duferco
TRAVI E PROFILATI

Azienda certificata
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

TRAVI E PROFILATI DI PALLANZENO S.p.A.

CE

1608

Travi e Profilati di Pallanzeno Spa Via A. Diaz, 248 - 25010 San Zeno Naviglio BS - IT

23

1608 CPR P239

EN10025-1:2004

S355J2

Destinati ad essere utilizzati su prodotti per impieghi strutturali.
Intended to be used on products for structural steel

Tollerance /tolerances:		
Carico di snervamento / *Yeld strength*		
Carico di rottura / *tensile strength*	:	Espressamente indicati nella DoP
Allungamento / *elongation*		*Espressed as indicated in the DoP*
Resilienza / *impact strength*		
Saldabilità / *weldability CEV*		

Durabilità / *durability:* NPD

03 N° 2024 DDT / BA/145

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
MANNISIPRE SPA	1724000079	123A90A	Q012400081

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.02.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

MANNI **SIPRE**
STEEL CO-CREATION

PART OF MANNI GROUP

DICHIARAZIONE DI PRESTAZIONE (Reg. UE N. 305/2011)
DECLARATION OF PERFORMANCE (Reg. UE N. 305/2011)

N° 0000459242-1724000079 1 LOTTO.-0000202442

Manni Sipre Spa - Via Righi, 7 – 37135 Verona
in qualità di fabbricante, dichiara che i prodotti identificati univocamente attraverso i riferimenti
as a manufacturer, declares that all products are uniquely identified throught these references:

conferma di produzione
production code 0000459242

ordine cliente:
customer order: 1724000079 1 LOTTO.

documento di trasporto:
document of trasport DDT 0000202442

PER GLI USI PREVISTI
For the intended uses

ELEMENTI STRUTTURALI FINITI
FABRICATED STRUCTURAL STEELWORKS

Presentano le seguenti caratteristiche essenziali e prestazioni
Have the following essential characteristics and performances:

CARATTERISTICHE ESSENZIALI *ESSENTIAL CHARACTERISTICS*	**PRESTAZIONI DICHIARATE** *DECLARED PERFORMANCE*		**NORMA ARMONIZZATA** *HARMONISED STANDARD*
Tolleranze geometriche e di forma *Tolerances on dimensions and shape*	EN 1090-2:2018, appendice B, prospetto B.6, classe 1 (se non diversamente specificato nella conferma di produzione) *EN 1090-2:2018, annex B, table B.6, class 1 (if is not specified something different on production code)*		EN 1090-1:2009 + A1:2011
Saldabilità *Weldabilty*	S235/S275/S355 e JR/J0/J2/K2	EN 10025-2/EN 10210/EN 10219	
	S235/S275/S355 e JRW/J0W/J2W/K2W	EN 10025-5	
Resilienza *Impact test*	S235/S275/S355 e JR/JRW = 27J (+20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J0/J0W = 27J (0°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e J2/J2W = 27J (-20°C)	EN 10025-2-5/EN 10210/EN 10219	
	S235/S275/S355 e K2/K2W = 40J (-20°C)	EN 10025-2-5	
Reazione al fuoco *Fire test*	EN 13501-1 Classe A1		
Rilascio al cadmio *Cadmium release*	NPD		
Emissione di radioattività *Radioactivity emission*	NPD		
Durabilità *Durability*	NPD		
Fabbricazione *Fabrication*	EXC 1-2-3-4 (come specificato nella conferma di produzione e nel documento di trasporto) *(as specified on production code and on document of trasport)*		

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
T. +39 045 6339400 | F. +39 045 6339435
26013 Crema (CR) | ITALY | Via Gaeta, 23
T. +39 037 3890011 | F. +39 037 382364
33030 Campoformido (UD) | ITALY | Via P. di Udine, 118 | T. +39 0432 653611 | F. +39 0432 653600
63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

- Norma armonizzata di riferimento EN 1090-1:2009 + A1:2011 "Esecuzione di strutture di acciaio e di alluminio"
- Harmonised standard norm EN 1090-1:2009 + A1:2011 "Execution of steel structures and aluminium structures"

- Si dichiara inoltre che l'organismo notificato, IIS CERT Srl (n° 0475) ha effettuato l'ispezione iniziale dello stabilimento e del controllo della produzione in fabbrica, sorveglianza, valutazione e verifica continua del controllo della produzione in fabbrica secondo il sistema VVCP 2+ e ha rilasciato il certificato n° 0475-CPR-437.
- Moreover, we declare that the notified certification body, IIS CERT Srl. (No.0475), performed the initial inspection of the manufacturing plant and performed the check of fabrication in the factory, surveillance, evaluation and continuous tests of the factory fabrication check according to the VVCP 2+ system and issued the certificate no. 0475-CPR-437.

CE

24

0475-CPR-437

Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante, Manni Sipre SpA.
This declaration of performance is issued under the sole responsibility of the manufacturer Manni Sipre SpA.

27/02/2024

Massimo Fabbri
Direttore Tecnico / Technical Director

Sede Legale e Amministrativa / Registered and Administrative HQ
Via Augusto Righi, 7 | 37135 Verona | ITALY | T. +39 045 8088911
F. +39 045 8204829 | REA VR 213819 | P.IVA / C.F. 02047310236
Cap. Soc. € 18.510.000,00
www.mannisipre.it | mannisipre@mannigroup.com
Direzione e coordinamento:
MANNI GROUP S.p.A | P.IVA e C.F. 02960130231

Stabilimenti e sedi commerciali / Plants and sales offices:
37060 Mozzecane (VR) | ITALY | Via Mediana
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63076 Monteprandone (AP) | ITALY | Via Scopa, 20
T. +39 073 571051 | F. +39 073 5751312
10098 Rivoli (TO) | ITALY | Strada Settima, 5
T. +39 011 238 76 11 | F. +39 011 254 06 78

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette
A05

MANNI SIPRE STEEL ENGINEERING
UFFICIO CERTIFICATI - COPIA INFORMATICA CONFORME ORIGINALE
NS. CONFERMA: 0000459242
RIF. ORDINE: 1724000079 1 LOTTO.
DDT: 0000202442
PLACCA/COLATA: 80174

Mill Test Certificate NrX 5022180

Delivery note number 5022180 from 18 January 2024 A03

A08 Our reference : 1100685381
A07 Your reference : OSC2361516
27.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR
A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING
B02

Inspection certificate according to EN 10204:2004 / 3.1
A02

Ord.item	Product (B01)	Length	Weight (B13)	Heat nr (B07)	Weight	Bund.	Bars (B08)
000001	HE 340 A	15.100 mm	1,609 to	80174	1,609 to		1

Heat nr (B07)	Heat analysis (%) C	Mn	P	S	Si	N	Al	Cu	Ni	Cr	V	Nb	Mo	Ti	B	CEV	Aleq
Min					0,14												0,020
Max	0,20	1,60	0,030	0,030	0,25			0,55					0,220			0,45	100,0
80174	0,07	0,71	0,020	0,014	0,17	0,009	0,004	0,35	0,14	0,11	0,034	0,002	0,040	0,001	0,0005	0,26	0,023

Heat nr	Tensile test N/mm2 ReH (C11)	Rm (C12)	5,65VS A(%) (C13)	Charpy impact test C40 KV Position (C01)	(C02)	mm (C41)	°C (C03)	UNAGED J 1 (C42)	2	3	M (C43)
Min	345	470	22,00	FL.1/3	L		-20		19		27
Max		630									
80174	461	557	22,14	FL.1/3	L		-20	239	198	254	230

Z05
Hot rolled products of structural steels according to EN10025-1:2004
Intended uses : Building constructions or civil engineering
Durability : No performance determined
Regulated substance : No performance determined
Weldability : according to EN 1011-2
EAF-Steel
Dimension and Shape tolerances :
I- Profiles : EN 10365 and EN10034
H-Profiles: EN 10365 and EN10034
Angles L : EN10056 Part 1 and 2
U-Profiles : EN 10365 and EN 10279
Square : EN 10059
UB-und UC-Profiles und UBP-support piles : EN 10365 and EN10034
Environmental product declaration and Xcarb declaration:

Dal Magro Damien
Porteur de signature spéciale
Z03

Z04
CE 0769 08
UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

3262 / 3402

A10 Sales Agent:
ArcelorMittal Commercial
Italy Srl
43, Str. Torino
I-10043 ORBASSANO TO

A01 Plant:
ArcelorMittal Belval & Differdange
Site de Differdange
L-4503 Differdange

A04
ArcelorMittal Belval & Differdange
Service Gestion Qualité
66, rue de Luxembourg
L-4009 Esch/Alzette

ArcelorMittal

A05
Mill Test Certificate NrX 5022180

Delivery note number 5022180 from 18 January 2024 A03

A08 Our reference : 1100685381
A07 Your reference : OSC2361516
27.10.2023
MANNI SIPRE S.P.A.

MANNI SIPRE S.P.A.
VIA A. RIGHI 7
I-37135 VERONA VR

A06

S355J2+ M ACCORDING TO EN10025-2/2019 SUITABLE FOR GALVANISING

B02

Inspection certificate according to EN 10204:2004 / 3.1

A02

https://sections.arcelormittal. com/documentation/Product_decla ration/EN
Declaration of Performance
https://sections.arcelormittal. com/3444/3134/EN

Dal Magro Damien
Porteur de signature spéciale

Z03

Z04

CE 0769 06

UK CA 0038 21

Code of the product type: 1.0577 / DOP: AMDI-2/09-CPR-13-1

☐ EN 10168:2004

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400253

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

22.04.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 7**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **15-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **03-04-2024**

final: **08-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

2 piece(s) of steel plate(s) **34044 kg** , as per attached inspection Certificate no.: **A0378984**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400027-7

Z02 Date 15-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378984**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11,12 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
869177	245599/1	30	65,00	3000,0	10000	1		15.649	43893	17-04-2024	1PLATCS65021
958443	245595/1	40	75,00	3050,0	10000	1		18.395	43890	16-04-2024	1PLATCS75015
	Sum					**2**		**34.044**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
869177	.030	.328	1.610	.005	.0004	.042	.178	.170	.004	.154	.005	.035	.014	.0059	.0002	.0020	.0018	.0020	.0020	.0020	.36
958443	.030	.320	1.610	.005	.0006	.035	.171	.170	.005	.156	.005	.035	.012	.0059	.0002	.0060	.0014	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
869177	.14	.040	.054	7.12
958443	.14	.040	.052	5.93

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							380	480		19.0	
Set values <=								640			93.00
869177	245599	Ø	10.02	F	V	T	434	553	A5	31.1	78.59
958443	245596	Ø	10.02	F	V	T	419	543	A5	30.2	77.19

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
869177	245599	CV 10x10	F	O	T	-40	372	381	376	376	
	245599	CV 10x10	F	K	T	-40	419	405	410	411	
958443	245596	CV 10x10	F	O	T	-40	372	364	376	370	
	245596	CV 10x10	F	K	T	-40	393	403	386	394	
>= Set values <=						-40	26	26	26	42	
869177	245599	CV 10x10	F	ZB2	T	-40	343	343	340	342	strain aged 5%, 60 min. at 250°C
958443	245596	CV 10x10	F	ZB2	T	-40	341	348	344	344	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C42 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>= Set values <=						384	384	384	25	25	25	35
869177	245605	Ø	9.94	F	S	549	552	548	84	84	84	84
958443	245596	Ø	9.96	F	S	539	536	540	80	83	83	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869177	245603	.034	.310	1.600	.005	.0007	.039	.174	.180	.004	.157	.004	.036	.014	.0053	.0003	.0020	.0013	.0020	.0020
958443	245596	.033	.314	1.600	.005	.0008	.034	.170	.170	.005	.156	.004	.035	.011	.0058	.0003	.0020	.0014	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.090	.110	
869177	245603	.0020	.0020	.36	.15	.040	.054	7.36
958443	245596	.0020	.0020	.36	.14	.039	.050	5.86

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

17-APR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400285

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

03.05.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 8**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **19-04-2024**

Order Status: **complete**

Inspection Dates
First: **16-04-2024**

final: **16-04-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

3 piece(s) of steel plate(s) **45253 kg** , as per attached inspection Certificate no.: **A0379014**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400027-8 K

Z02 Date 19-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0379014**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11,12 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764715	245600/1	30	65,00	3000,0	10000	1		15.573	44085	18-04-2024	1PLATCS65021
764718	245945/1	10	65,00	2850,0	7600	1		11.291	44095	18-04-2024	1PLATCS65021
958443	245596/1	40	75,00	3050,0	10000	1		18.389	44038	17-04-2024	1PLATCS75015
	Sum					**3**		**45.253**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
764715	.034	.317	1.600	.005	.0005	.039	.171	.170	.004	.164	.004	.034	.012	.0058	.0002	.0020	.0016	.0020	.0020	.0020	.36
764718	.030	.329	1.640	.004	.0004	.045	.176	.170	.005	.155	.005	.035	.014	.0054	.0002	.0020	.0017	.0020	.0020	.0020	.36
958443	.030	.320	1.610	.005	.0006	.035	.171	.170	.005	.156	.005	.035	.012	.0059	.0002	.0060	.0014	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
764715	.15	.038	.050	6.72
764718	.14	.040	.054	8.33
958443	.14	.040	.052	5.93

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

Al/N: Al/N

LF02: Nb+V+Ti

Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15

LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							380	480		19.0	
Set values <=								640			93.00
764715	245601	Ø	10.01	F	V	T	424	544	A5	29.4	77.93
764718	245945	Ø	10.03	F	V	T	426	550	A5	29.2	77.37
958443	245596	Ø	10.02	F	V	T	419	543	A5	30.2	77.19

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	26	26	26	42	
764715	245601	CV 10x10	F	ZB2	T	-40	349	337	346	344	strain aged 5%, 60 min. at 250°C
764718	245945	CV 10x10	F	ZB2	T	-40	338	353	351	347	strain aged 5%, 60 min. at 250°C
958443	245596	CV 10x10	F	ZB2	T	-40	341	348	344	344	strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60	
764715	245601	CV 10x10	F	O	T	-40	373	385	367	375	
	245601	CV 10x10	F	K	T	-40	401	386	406	397	
764718	245945	CV 10x10	F	O	T	-40	420	396	405	407	
	245945	CV 10x10	F	K	T	-40	417	432	425	425	
958443	245596	CV 10x10	F	O	T	-40	372	364	376	370	
	245596	CV 10x10	F	K	T	-40	393	403	386	394	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43	
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	samp.cond.
						°C	J	J	J	J	

F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07	B06	C40		C01	C02	C12	C12	C12				
Heat No.	Plate No	Shape	SpThickn	loc.	Dir	Rm	Rm	Rm	Z(SV)	Z(SV)	Z(SV)	Z(AV)
			MM			MPa	MPa	MPa	%	%	%	%
>=						384	384	384	25	25	25	35
Set values <=												
764715	245601	Ø	9.96	F	S	545	545	545	82	80	76	79
764718	245958	Ø	9.97	F	S	544	548	545	79	83	79	81
958443	245596	Ø	9.96	F	S	539	536	540	80	83	83	82

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764715	245601	.034	.314	1.600	.005	.0008	.033	.171	.170	.005	.158	.004	.036	.011	.0052	.0003	.0020	.0013	.0020	.0020
764718	245952	.034	.320	1.610	.005	.0004	.042	.170	.170	.005	.154	.004	.034	.013	.0055	.0002	.0020	.0018	.0020	.0020
958443	245596	.033	.314	1.600	.005	.0008	.034	.170	.170	.005	.156	.004	.035	.011	.0058	.0003	.0020	.0014	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.090	.110	
764715	245601	.0020	.0020	.36	.15	.040	.051	6.35
764718	245952	.0020	.0020	.36	.15	.038	.051	7.64
958443	245596	.0020	.0020	.36	.14	.039	.050	5.86

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

Remarks

certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

02-MAY-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400148

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data
MTSMD Signature — Date

Sonia Emiliani **20.03.2024**

Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 2**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **14-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **01-03-2024**

final: **13-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

5 piece(s) of steel plate(s) **43285 kg** , as per attached inspection Certificate no.: **A0378545**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400027-2

Z02 Date 14-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378545**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11,12 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764349	250043/1	20	65,00	1600,0	7600	1		6.345	42749	14-03-2024	1PLATCS65021
764718	245939/2	20	65,00	1600,0	7600	1		6.368	42749	14-03-2024	1PLATCS65021
764718	245941/1	10	65,00	2850,0	7600	1		11.310	42832	15-03-2024	1PLATCS65021
764718	245943/1	10	65,00	2850,0	7600	1		11.291	42832	15-03-2024	1PLATCS65021
856504	246555/1	60	40,00	2500,0	10000	1		7.971	42821	14-03-2024	1PLATCS40053
	Sum					**5**		**43.285**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
764349	.053	.352	1.580	.004	.0007	.037	.154	.160	.004	.156	.003	.036	.013	.0036	.0002	.0020	.0015	.0020	.0020	.0020	.37
764718	.030	.329	1.640	.004	.0004	.045	.176	.170	.005	.155	.005	.035	.014	.0054	.0002	.0020	.0017	.0020	.0020	.0020	.36
856504	.028	.341	1.550	.005	.0006	.039	.183	.014	.007	.013	.003	.027	.012	.0051	.0003	.0020	.0022	.0020	.0020	.0020	.33

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
764349	.16	.039	.052	10.28
764718	.14	.040	.054	8.33
856504	.13	.030	.042	7.65

C99 - Supplementary information
Bi <= 0,01%

C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
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20-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						380	480		19.0	
Set values	<=							640			93.00
764349	250043	Ø	9.96	F	V	T	447	593	A5	28.2	75.37
764718	245939	Ø	10.03	F	V	T	418	545	A5	29.7	76.67
	245945	Ø	10.03	F	V	T	426	550	A5	29.2	77.37
	>=						390	500		19.0	
Set values	<=							660			93.00
856504	246555	30,0	40.60	F	O	T	492	572	A5	24.5	85.95

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

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voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
764349	250043	CV 10x10	F	O	T	-40	326	324	317	322	
	250043	CV 10x10	F	K	T	-40	291	322	330	314	
764718	245939	CV 10x10	F	O	T	-40	375	371	384	377	
	245945	CV 10x10	F	O	T	-40	420	396	405	407	
	245939	CV 10x10	F	K	T	-40	393	405	404	401	
	245945	CV 10x10	F	K	T	-40	417	432	425	425	
856504	246555	CV 10x10	F	O	T	-40	385	389	377	383	
>= Set values <=						-40	26	26	26	42	
764349	250043	CV 10x10	F	ZB2	T	-40	280	270	224	258	strain aged 5%, 60 min. at 250°C
764718	245945	CV 10x10	F	ZB2	T	-40	338	353	351	347	strain aged 5%, 60 min. at 250°C
856504	246555	CV 10x10	F	ZB2	T	-40	346	343	349	346	strain aged 5%, 60 min. at 250°C

C40;shape:

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Höpfl Nadine

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43		
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV		samp.cond.
						°C	J	J	J	J		

CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

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ONE STEP AHEAD.

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						384	384	384	25	25	25	35
Set values <=												
764349	250043	Ø	10.01	F	S	591	590	591	58	63	61	61
764718	245958	Ø	9.97	F	S	544	548	545	79	83	79	81
>=						400	400	400	25	25	25	35
Set values <=												
856504	125624	Ø	9.95	F	S	531	531	530	83	84	84	83

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
>=							.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764349	247825	.055	.354	1.600	.004	.0008	.039	.169	.170	.004	.160	.004	.036	.013	.0038	.0003	.0020	.0022	.0020	.0020
764718	245952	.034	.320	1.610	.005	.0004	.042	.170	.170	.005	.154	.004	.034	.013	.0055	.0002	.0020	.0018	.0020	.0020
	247530	.034	.312	1.610	.004	.0007	.040	.173	.170	.005	.157	.004	.035	.013	.0048	.0002	.0020	.0016	.0020	.0020
856504	215981	.027	.353	1.570	.006	.0005	.042	.181	.013	.005	.013	.003	.027	.012	.0052	.0002	.0020	.0022	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
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Ref. No.:
Office: Vienna
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20-MAR-2024

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.42	.22	.090	.110	
764349	247825	.0020	.0020	.38	.17	.040	.053	10.26
764718	245952	.0020	.0020	.36	.15	.038	.051	7.64
	247530	.0020	.0020	.36	.15	.039	.052	8.33
856504	215981	.0020	.0020	.33	.13	.030	.042	8.08

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory
Item 60
Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400149

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani

20.03.2024

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 3**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **14-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **06-03-2024**

final: **06-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

17 piece(s) of steel plate(s) **78248 kg** , as per attached inspection Certificate no.: **A0378546**

Specification

S420MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes ☒
review manufacturer's declared analysis: yes ☒
witness / verify ultrasonic examination: yes ☒ n/a ☐
witness / verify microstructure examination: yes ☐ n/a ☒
witness /verify corrosion testing: yes ☐ n/a ☒
random visual and dimensional control and check of hard stamping: yes ☒

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400027-3

Z02 Date 14-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378546**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024	**Date of dispatch**	14-03-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B // SPEZ.: 123A90-MTO-ST-005_00 AND 123A90-DDL-ST-SP-90018 REV.00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
763602	246556/1	120	20,00	2500,0	12000	1		4.781	42821	1PLATCS20056
869272	247770/2	70	30,00	2450,0	8000	1		4.706	42749	1PLATCS30058
869272	247770/1	70	30,00	2450,0	8000	1		4.706	42749	1PLATCS30058
869272	247772/2	70	30,00	2450,0	8000	1		4.707	42749	1PLATCS30058
869272	247772/1	70	30,00	2450,0	8000	1		4.706	42749	1PLATCS30058
869272	247774/1	70	30,00	2450,0	8000	1		4.710	42749	1PLATCS30058
869272	247774/2	70	30,00	2450,0	8000	1		4.711	42749	1PLATCS30058
869272	247776/2	70	30,00	2450,0	8000	1		4.688	42749	1PLATCS30058
869272	247776/1	70	30,00	2450,0	8000	1		4.688	42749	1PLATCS30058
869272	247800/21	100	20,00	1950,0	12000	1		3.752	42821	1PLATCS20056
869272	247800/11	100	20,00	1950,0	12000	1		3.758	42821	1PLATCS20056
869272	247801/2	100	20,00	1950,0	12000	1		3.753	42821	1PLATCS20056
869272	247801/1	100	20,00	1950,0	12000	1		3.752	42821	1PLATCS20056
869272	247890/2	90	25,00	2100,0	12000	1		5.034	42821	1PLATCS25061

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
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20-MAR-2024

voestalpine
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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
869272	247890/1	90	25,00	2100,0	12000	1		5.034	42821	1PLATCS25061
869272	249150/1	120	20,00	2500,0	12000	1		4.801	42821	1PLATCS20056
869272	249357/1	110	25,00	2500,0	12000	1		5.961	42821	1PLATCS25061
		Sum				**17**		**78.248**		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.		C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
	>=						.015															
Set values	<=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
763602		.028	.326	1.370	.007	.0010	.041	.122	.013	.003	.013	.005	.029	.013	.0045	.0003	.0020	.0020	.0020	.0020	.0020	.28
869272		.033	.327	1.360	.007	.0006	.031	.117	.014	.003	.010	.004	.027	.011	.0045	.0003	.0020	.0009	.0020	.0020	.0020	.29

Z02
Inspection representative voestalpine
Höpfl Nadine

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LRQA
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Date:
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Office: Vienna
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Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
763602	.12	.034	.047	9.11
869272	.12	.031	.042	6.89

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
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ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						390	500		19.0	
Set values	<=							660			93.00
869272	247772	30,0	30.33	F	O	T	481	547	A5	24.0	87.85
	>=						400	500		19.0	
Set values	<=							660			93.00
763602	240276	30,0	22.03	F	O	T	491	549	A5	22.6	89.31
869272	247800	30,0	20.30	F	O	T	479	577	A5	25.7	83.03
	247801	30,0	20.45	F	O	T	506	567	A5	24.5	89.19
	247890	30,0	25.49	F	O	T	506	560	A5	26.7	90.29

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
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LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
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Date:
Ref. No.:
Office: Vienna
Signature
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voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
763602	246556	CV 10x10	F	O	T	-40	400	383	395	392	
869272	247772	CV 10x10	F	O	T	-40	374	379	383	379	
	247800	CV 10x10	F	O	T	-40	420	422	432	425	
	247890	CV 10x10	F	O	T	-40	395	388	394	392	
>= Set values <=						-40	26	26	26	42	
763602	246556	CV 10x10	F	ZB2	T	-40	344	339	350	344	strain aged 5%, 60 min. at 250°C
869272	247772	CV 10x10	F	ZB2	T	-40	353	351	346	350	strain aged 5%, 60 min. at 250°C

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
763602	237514	.029	.324	1.370	.007	.0009	.040	.116	.014	.004	.013	.005	.029	.013	.0051	.0003	.0020	.0016	.0020	.0020
869272	247772	.035	.322	1.340	.007	.0005	.032	.116	.014	.003	.009	.003	.026	.010	.0058	.0002	.0020	.0009	.0020	.0020

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
>=								2.00
Set values <=		.0100	.0100	.42	.22	.090	.110	
763602	237514	.0020	.0020	.28	.12	.034	.047	7.84
869272	247772	.0020	.0020	.28	.12	.029	.039	5.52

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

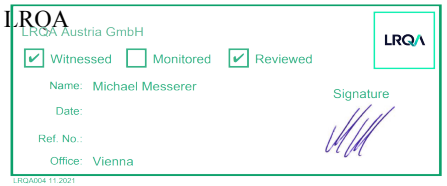
C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA



20-MAR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400150

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **20.03.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 4**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **18-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **04-03-2024**

final: **11-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

2 piece(s) of steel plate(s) **21991 kg** , as per attached inspection Certificate no.: **A0378609**

Specification

S420MLO Z35 EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate
EN 10204 - 3.2

AUT2400027-4

Z02 Date 18-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378609**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO Z35

B03 Standard EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

Supplementary requirements Z35 - EN 10164

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B04 Delivery condition thermomechanical rolled + accelerated cooled

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11,12 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

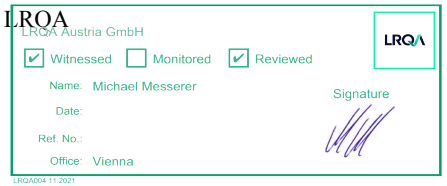
B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	Date of dispatch	reference no.
764715	245601/1	30	65,00	3000,0	10000	1		15.623	42943	18-03-2024	1PLATCS65021
764718	245939/1	20	65,00	1600,0	7600	1		6.368	42974	19-03-2024	1PLATCS65021
		Sum				**2**		**21.991**			

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA



20-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07

Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
764715	.034	.317	1.600	.005	.0005	.039	.171	.170	.004	.164	.004	.034	.012	.0058	.0002	.0020	.0016	.0020	.0020	.0020	.36
764718	.030	.329	1.640	.004	.0004	.045	.176	.170	.005	.155	.005	.035	.014	.0054	.0002	.0020	.0017	.0020	.0020	.0020	.36

Chemical composition (Heat analysis) - part 2 of 2

B07

Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
764715	.15	.038	.050	6.72
764718	.14	.040	.054	8.33

C99 - Supplementary information

Bi <= 0,01%

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
Set values >=							380	480		19.0	
Set values <=								640			93.00
764715	245601	Ø	10.01	F	V	T	424	544	A5	29.4	77.93
764718	245939	Ø	10.03	F	V	T	418	545	A5	29.7	76.67

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
>= Set values <=						-40	42	42	42	60	
764715	245601	CV 10x10	F	O	T	-40	373	385	367	375	
	245601	CV 10x10	F	K	T	-40	401	386	406	397	
764718	245939	CV 10x10	F	O	T	-40	375	371	384	377	
	245939	CV 10x10	F	K	T	-40	393	405	404	401	
>= Set values <=						-40	26	26	26	42	
764715	245601	CV 10x10	F	ZB2	T	-40	349	337	346	344	strain aged 5%, 60 min. at 250°C
764718	245945	CV 10x10	F	ZB2	T	-40	338	353	351	347	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface
C02;Dir:

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	C02 PosTh.	C03 Dir	C42 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.

T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn MM	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
Set values >=						384	384	384	25	25	25	35
764715	245601	Ø	9.96	F	S	545	545	545	82	80	76	79
764718	245958	Ø	9.97	F	S	544	548	545	79	83	79	81

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.650	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
764715	245601	.034	.314	1.600	.005	.0008	.033	.171	.170	.005	.158	.004	.036	.011	.0052	.0003	.0020	.0013	.0020	.0020
764718	247530	.034	.312	1.610	.004	.0007	.040	.173	.170	.005	.157	.004	.035	.013	.0048	.0002	.0020	.0016	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
Set values >=								2.00
Set values <=		.0100	.0100	.42	.22	.090	.110	
764715	245601	.0020	.0020	.36	.15	.040	.051	6.35
764718	247530	.0020	.0020	.36	.15	.039	.052	8.33

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S1/Body, Grid 200 mm, EN 10160 class E2/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

20-MAR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400179

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — **28.03.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 5**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **22-03-2024**

Order Status: **incomplete**

Inspection Dates
First: **10-03-2024**

final: **10-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

1 piece(s) of steel plate(s) **5642 kg** , as per attached inspection Certificate no.: **A0378613**

Specification

S420MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400027-5

Z02 Date 22-03-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378613**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024	**Date of dispatch**	19-03-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO **B03 Standard** EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B // SPEZ.: 123A90-MTO-ST-005_00 AND 123A90-DDL-ST-SP-90018 REV.00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
869272	249352/1	80	30,00	2500,0	9500	1		5.642	42974	1PLATCS30058
	Sum					**1**		**5.642**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
869272	.033	.327	1.360	.007	.0006	.031	.117	.014	.003	.010	.004	.027	.011	.0045	.0003	.0020	.0009	.0020	.0020	.0020	.29

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
869272	.12	.031	.042	6.89

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	C01 SpThickn MM	C01 loc.	C01 PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						390	500		19.0	
Set values	<=							660			93.00
869272	249352	30,0	30.43	F	O	T	504	547	A5	26.9	92.20

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
Set values >=						-40	42	42	42	60	
869272	249352	CV 10x10	F	O	T	-40	389	396	393	393	
Set values >=						-40	26	26	26	42	
869272	247772	CV 10x10	F	ZB2	T	-40	353	351	346	350	strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869272	247772	.035	.322	1.340	.007	.0005	.032	.116	.014	.003	.009	.003	.026	.010	.0058	.0002	.0020	.0009	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.090	.110	
869272	247772	.0020	.0020	.28	.12	.029	.039	5.52

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

27-MAR-2024

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
VOESTALPINE GROBBLECH GMBH & CO.	1724000081	123A90A	Q012400225

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

According to the spc.----------.

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani **12.04.2024**

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

Certificate Number: **AUT 2400027 / 6**
Page: 1 of 1

Inspection Certificate

Project: ----------
Client: **voestalpine Grobblech GmbH**
voestalpine-Straße 3, 4020 Linz, Austria

Office: **Vienna**

Clients Order Number: **4500179**

Date: **02-04-2024**

Order Status: **incomplete**

Inspection Dates
First: **10-03-2024**

final: **10-03-2024**

This certificate is issued to voestalpine Grobblech GmbH, Linz/Austria, to certify that the undersigned Surveyor attended their works Linz for the purpose of testing and inspecting the undernoted material with satisfactory results as stated below.

Purchaser: **Rosetti Marino Spa**
Via Trieste 230
I-48122 RAVENNA

Order No.: **1724000081 123A90A**

Description:

1 piece(s) of steel plate(s) **4804 kg** , as per attached inspection Certificate no.: **A0378723**

Specification

S420MLO EN 10225-1: 2019

Delivery Condition: thermomechanical rolled + accelerated cooled

Scope of inspection:

witness mechanical testing: yes [X]
review manufacturer's declared analysis: yes [X]
witness / verify ultrasonic examination: yes [X] n/a [ ]
witness / verify microstructure examination: yes [ ] n/a [X]
witness /verify corrosion testing: yes [ ] n/a [X]
random visual and dimensional control and check of hard stamping: yes [X]

Identification:

Makers Brand voestalpine
Material Quality
Heat No.
Plate No.
Brand of LRQA

LRQA Austria GmbH
[✓] Witnessed [ ] Monitored [✓] Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

Surveyor to LRQA Austria GmbH

A subsidiary of LRQA Group Limited

LRQA Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

voestalpine Grobblech GmbH
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/grobblech

A02
Inspection certificate

EN 10204 - 3.2

AUT2400027-6

Z02 Date 02-04-2024

A04
manufacturer's work symbol
voestalpine

A03 Document number	**A0378723**	**A08 Order-No.:**	**4500179**	**A07 OrderDat.**	24-01-2024	**Date of dispatch**	27-03-2024 400F

A06 Customer
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

B01 Product Plate

B02 Material S420MLO **B03 Standard** EN 10225-1 : 2019

A07 OrderNo. 1724000081 123A90A

B04 Delivery condition thermomechanical rolled + accelerated cooled

A06 Consignee
Rosetti Marino Spa
Via Trieste 230
I-48122 RAVENNA

A10 - Supplementary information
Project :
CROSS WIND

B03 - Supplementary requirements
MATERIAL ACCORDING TO EN10225 (2019) OPTIONS 2,7,8,11 AND 17. MATERIAL IS PRE-QUALIFIED AS PER EN10225 (2019), ANNEX B // SPEZ.: 123A90-MTO-ST-005_00 AND 123A90-DDL-ST-SP-90018 REV.00

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
869272	249151/1	120	20,00	2500,0	12000	1		4.804	43297	1PLATCS20056
		Sum				**1**		**4.804**		

B14 - Supplementary information
Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.42
869272	.033	.327	1.360	.007	.0006	.031	.117	.014	.003	.010	.004	.027	.011	.0045	.0003	.0020	.0009	.0020	.0020	.0020	.29

Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.090	.110	
869272	.12	.031	.042	6.89

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width MM	SpThickn MM	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %
	>=						400	500		19.0	
Set values	<=							660			93.00
869272	249151	30,0	20.52	F	O	T	481	568	A5	25.1	84.64

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA

LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	samp.cond.
Set values >=						-40	26	26	26	42	
869272	247772	CV 10x10	F	ZB2	T	-40	353	351	346	350	strain aged 5%, 60 min. at 250°C
Set values >=						-40	42	42	42	60	
869272	247800	CV 10x10	F	O	T	-40	420	422	432	425	

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
ZB2: 2mm below surface
C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
samp.cond.: sample condition

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.650	.020	.0100	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
869272	247772	.035	.322	1.340	.007	.0005	.032	.116	.014	.003	.009	.003	.026	.010	.0058	.0002	.0020	.0009	.0020	.0020

Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.42	.22	.090	.110	
869272	247772	.0020	.0020	.28	.12	.029	.039	5.52

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by an electronic signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
Witnessed Monitored Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Ultrasonic test acc. EN 10160, EN 10160 class S0/Body, Grid 200 mm, EN 10160 class E1/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE – USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Gabriel Marco

Z03
third party stamp

LRQA
LRQA Austria GmbH
☑ Witnessed ☐ Monitored ☑ Reviewed
Name: Michael Messerer
Date:
Ref. No.:
Office: Vienna
Signature
LRQA004 11.2021

11-APR-2024

voestalpine
ONE STEP AHEAD.

4 STRUCTURAL MATERIAL CATEGORY 5-TRACEABILITY NOT APPLICABLE

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90256	01	CWLH001	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90256	01	CWLH001	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90256	01	CWLH001	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90256	01	CWLH001	814	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	815	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH001	816	1	PL8x150	S275JR
123A90-FDL-ST-DD-90256	01	CWLH002	637	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	639	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90256	01	CWLH002	642	1	PL8x150	S275JR
123A90-FDL-ST-DD-90256	01	CWLH002	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90256	01	CWLH002	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90256	01	CWLH002	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90257	01	CWLH003	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90257	01	CWLH003	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90257	01	CWLH003	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90257	01	CWLH003	818	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH003	819	1	PL8x150	S275JR
123A90-FDL-ST-DD-90257	01	CWLH004	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH004	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90257	01	CWLH004	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH004	644	4	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90257	01	CWLH004	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH004	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH004	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90257	01	CWLH004	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90257	01	CWLH004	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90257	01	CWLH004	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90258	01	CWLH006	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90258	01	CWLH006	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90258	01	CWLH006	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90258	01	CWLH006	1171	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	1172	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90258	01	CWLH006	1173	1	PL8x150	S275JR
123A90-FDL-ST-DD-90259	00	CWLH007	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90259	00	CWLH007	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90259	00	CWLH007	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90259	00	CWLH007	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH007	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90259	00	CWLH008	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90259	00	CWLH008	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90259	00	CWLH008	760	6	BROOCH PIN	ELASTICSTEEL

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90259	00	CWLH008	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90259	00	CWLH008	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90260	00	CWLH009	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90260	00	CWLH009	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90260	00	CWLH009	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90260	00	CWLH009	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH009	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90260	00	CWLH010	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90260	00	CWLH010	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90260	00	CWLH010	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90260	00	CWLH010	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90260	00	CWLH010	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90261	00	CWLH011	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90261	00	CWLH011	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90261	00	CWLH011	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90261	00	CWLH011	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH011	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90261	00	CWLH012	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH012	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90261	00	CWLH012	643	3	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90261	00	CWLH012	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH012	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH012	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH012	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90261	00	CWLH012	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90261	00	CWLH012	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90261	00	CWLH012	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90262	00	CWLH013	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90262	00	CWLH013	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90262	00	CWLH013	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90262	00	CWLH013	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH013	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90262	00	CWLH014	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90262	00	CWLH014	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90262	00	CWLH014	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90262	00	CWLH014	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90262	00	CWLH014	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90263	00	CWLH015	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90263	00	CWLH015	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90263	00	CWLH015	760	6	BROOCH PIN	ELASTICSTEEL

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90263	00	CWLH015	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH015	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90263	00	CWLH016	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90263	00	CWLH016	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90263	00	CWLH016	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90263	00	CWLH016	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90263	00	CWLH016	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90264	00	CWLH017	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90264	00	CWLH017	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90264	00	CWLH017	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90264	00	CWLH017	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH017	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90264	00	CWLH018	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90264	00	CWLH018	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90264	00	CWLH018	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90264	00	CWLH018	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90264	00	CWLH018	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90265	00	CWLH019	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH019	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90265	00	CWLH019	643	3	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90265	00	CWLH019	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH019	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH019	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH019	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90265	00	CWLH019	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90265	00	CWLH019	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH019	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90265	00	CWLH020	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90265	00	CWLH020	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90265	00	CWLH020	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90265	00	CWLH020	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90265	00	CWLH020	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90266	00	CWLH021	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90266	00	CWLH021	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90266	00	CWLH021	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90266	00	CWLH021	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH021	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90266	00	CWLH022	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90266	00	CWLH022	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90266	00	CWLH022	760	6	BROOCH PIN	ELASTICSTEEL

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90266	00	CWLH022	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90266	00	CWLH022	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90267	00	CWLH023	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90267	00	CWLH023	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	654	1	PL8x150	S275JR
123A90-FDL-ST-DD-90267	00	CWLH023	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90267	00	CWLH023	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH023	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90267	00	CWLH024	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90267	00	CWLH024	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	683	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	684	1	PL8x150	S275JR
123A90-FDL-ST-DD-90267	00	CWLH024	685	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90267	00	CWLH024	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90267	00	CWLH024	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90268	00	CWLH025	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90268	00	CWLH025	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90268	00	CWLH025	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH025	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90268	00	CWLH025	763	1	PL8x150	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90268	00	CWLH026	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90268	00	CWLH026	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90268	00	CWLH026	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90268	00	CWLH026	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90268	00	CWLH026	763	1	PL8x150	S275JR
123A90-FDL-ST-DD-90269	01	CWLH027	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90269	01	CWLH027	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	645	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	646	1	PL8x150	S275JR
123A90-FDL-ST-DD-90269	01	CWLH027	647	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90269	01	CWLH027	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90269	01	CWLH027	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90270	01	CWLH029	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90270	01	CWLH029	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90270	01	CWLH029	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90270	01	CWLH029	768	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	769	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH029	770	1	PL8x150	S275JR
123A90-FDL-ST-DD-90270	01	CWLH030	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH030	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90270	01	CWLH030	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH030	676	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90270	01	CWLH030	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH030	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90270	01	CWLH030	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90270	01	CWLH030	774	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH030	775	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90270	01	CWLH030	776	1	PL8x150	S275JR
123A90-FDL-ST-DD-90271	00	CWLH031	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90271	00	CWLH031	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90271	00	CWLH031	764	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	765	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH031	766	1	PL8x150	S275JR
123A90-FDL-ST-DD-90271	00	CWLH031	767	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90271	00	CWLH032	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90271	00	CWLH032	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	678	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	679	1	PL8x150	S275JR
123A90-FDL-ST-DD-90271	00	CWLH032	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90271	00	CWLH032	753	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90271	00	CWLH032	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90272	00	CWLH033	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90272	00	CWLH033	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	666	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	667	1	PL8x150	S275JR
123A90-FDL-ST-DD-90272	00	CWLH033	668	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH033	717	2	PL10x81,2	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90272	00	CWLH033	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90272	00	CWLH034	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90272	00	CWLH034	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90272	00	CWLH034	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90272	00	CWLH034	771	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	772	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90272	00	CWLH034	773	1	PL8x150	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	681	1	PL8x150	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	682	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	701	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	702	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	715	1	PL8x150	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90273	01	CWLH035	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	751	2	PL8x40	S275JR
123A90-FDL-ST-DD-90273	01	CWLH035	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90274	01	CWLH036	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90274	01	CWLH036	648	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	649	1	PL8x150	S275JR
123A90-FDL-ST-DD-90274	01	CWLH036	650	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	651	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	665	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90274	01	CWLH036	748	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90274	01	CWLH036	760	6	BROOCH PIN	ELASTICSTEEL

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90275	02	CWLH038	640	1	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90275	02	CWLH038	651	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	664	1	PL8x150	S275JR
123A90-FDL-ST-DD-90275	02	CWLH038	665	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	675	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	677	1	PL8x150	S275JR
123A90-FDL-ST-DD-90275	02	CWLH038	700	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90275	02	CWLH038	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90275	02	CWLH038	820	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90275	02	CWLH038	833	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90276	00	CWLH039	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	692	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	693	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	694	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	695	1	PL8x150	S275JR
123A90-FDL-ST-DD-90276	00	CWLH039	696	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	700	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90276	00	CWLH039	719	2	PL10x149	S275JR
123A90-FDL-ST-DD-90276	00	CWLH039	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90277	00	CWLH059	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH059	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90277	00	CWLH059	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH059	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH060	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH060	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90277	00	CWLH060	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH060	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH061	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH061	721	1	PL10x384	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90277	00	CWLH061	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH061	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH062	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH062	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90277	00	CWLH062	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH062	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH063	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH063	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH063	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH063	739	1	PL10x384	S275JR
123A90-FDL-ST-DD-90277	00	CWLH064	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90277	00	CWLH064	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90277	00	CWLH064	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90277	00	CWLH064	739	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH065	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH065	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH065	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH065	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH066	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH066	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH066	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH066	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH067	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH067	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH067	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH067	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH068	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH068	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH068	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH068	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH069	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH069	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH069	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH069	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH070	722	1	PL10x250	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90278	00	CWLH070	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH070	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH070	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90278	00	CWLH071	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90278	00	CWLH071	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90278	00	CWLH071	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90278	00	CWLH071	738	1	PL10x384	S275JR
123A90-FDL-ST-DD-90279	00	CWLH072	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90279	00	CWLH072	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	729	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	732	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90279	00	CWLH072	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH072	743	1	PL8x150	S275JR
123A90-FDL-ST-DD-90279	00	CWLH073	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90279	00	CWLH073	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	729	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	732	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90279	00	CWLH073	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90279	00	CWLH073	745	1	PL8x150	S275JR
123A90-FDL-ST-DD-90280	00	CWLH074	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90280	00	CWLH074	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	729	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	730	1	PD114,3X8,56	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90280	00	CWLH074	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	732	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90280	00	CWLH074	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH074	745	1	PL8x150	S275JR
123A90-FDL-ST-DD-90280	00	CWLH075	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90280	00	CWLH075	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90280	00	CWLH075	736	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	737	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90280	00	CWLH075	744	1	PL8x150	S275JR
123A90-FDL-ST-DD-90281	00	CWLH076	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90281	00	CWLH076	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	729	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	732	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90281	00	CWLH076	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH076	746	1	PL8x150	S275JR
123A90-FDL-ST-DD-90281	00	CWLH077	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90281	00	CWLH077	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	729	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	732	2	PD114,3X8,56	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90281	00	CWLH077	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90281	00	CWLH077	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90281	00	CWLH077	746	1	PL8x150	S275JR
123A90-FDL-ST-DD-90282	00	CWLH078	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90282	00	CWLH078	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH078	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90282	00	CWLH078	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH078	741	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH078	742	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH078	747	1	PL8x150	S275JR
123A90-FDL-ST-DD-90282	00	CWLH079	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90282	00	CWLH079	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH079	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90282	00	CWLH079	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH079	741	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH079	742	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH079	747	1	PL8x150	S275JR
123A90-FDL-ST-DD-90282	00	CWLH080	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90282	00	CWLH080	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH080	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90282	00	CWLH080	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH080	741	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH080	742	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH080	747	1	PL8x150	S275JR
123A90-FDL-ST-DD-90282	00	CWLH081	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90282	00	CWLH081	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH081	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90282	00	CWLH081	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH081	741	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH081	742	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90282	00	CWLH081	747	1	PL8x150	S275JR
123A90-FDL-ST-DD-90283	02	CWLH041	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH042	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH043	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH044	780	2	PL6x50	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90283	02	CWLH047	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH048	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH049	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH050	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH051	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH052	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH054	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH055	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH057	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH058	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH085	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH086	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH087	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH088	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH089	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH090	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH091	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH093	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH094	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH095	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH096	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH097	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH098	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH099	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH100	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH101	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90283	02	CWLH102	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90297	00	CWLF001	594	1	PL8x1965	S355J2
123A90-FDL-ST-DD-90297	00	CWLF002	612	1	PL8x1965	S355J2
123A90-FDL-ST-DD-90297	00	CWLF003	620	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF004	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF005	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF006	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF007	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF008	595	1	PL8x2010	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90298	00	CWLF009	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF010	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF011	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF012	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF013	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF014	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF015	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF016	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90298	00	CWLF017	595	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90299	00	CWLF018	596	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90299	00	CWLF019	613	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90299	00	CWLF020	627	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90300	00	CWLF021	619	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90300	00	CWLF022	597	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90300	00	CWLF023	614	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90301	00	CWLF024	626	1	PL8x1955	S355J2
123A90-FDL-ST-DD-90301	00	CWLF025	618	1	PL8x1955	S355J2
123A90-FDL-ST-DD-90301	00	CWLF026	598	1	PL8x1912	S355J2
123A90-FDL-ST-DD-90302	00	CWLF027	615	1	PL8x1912	S355J2
123A90-FDL-ST-DD-90302	00	CWLF028	599	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90302	00	CWLF029	616	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90303	00	CWLF030	624	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90303	00	CWLF031	625	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90303	00	CWLF036	601	1	PL8x1740	S355J2
123A90-FDL-ST-DD-90304	00	CWLF037	617	1	PL8x1740	S355J2
123A90-FDL-ST-DD-90304	00	CWLF038	602	1	PL8x1096	S355J2
123A90-FDL-ST-DD-90304	00	CWLF039	602	1	PL8x1096	S355J2
123A90-FDL-ST-DD-90304	00	CWLF040	781	1	PL8x1092	S355J2
123A90-FDL-ST-DD-90304	00	CWLF041	781	1	PL8x1092	S355J2
123A90-FDL-ST-DD-90305	00	CWLF042	603	1	PL8x2013	S355J2
123A90-FDL-ST-DD-90305	00	CWLF043	604	1	PL8x1708	S355J2
123A90-FDL-ST-DD-90305	00	CWLF044	605	1	PL8x1568	S355J2
123A90-FDL-ST-DD-90305	00	CWLF045	606	1	PL10x1638	S355J2
123A90-FDL-ST-DD-90306	00	CWLF035	623	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90306	00	CWLF046	607	1	PL10x1778	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90306	00	CWLF047	608	1	PL10x1638	S355J2
123A90-FDL-ST-DD-90306	00	CWLF048	609	1	PL10x1418	S355J2
123A90-FDL-ST-DD-90307	00	CWLF032	600	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90307	00	CWLF033	621	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90307	00	CWLF034	622	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90308	00	CWLR001	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR001	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR002	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR002	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR003	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR003	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR004	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR004	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR005	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR005	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR006	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR006	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR007	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR007	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR008	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR008	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR009	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR009	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR010	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR010	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR011	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR011	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90308	00	CWLR012	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90308	00	CWLR012	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR013	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR013	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR013	630	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR014	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR014	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR014	630	1	PL4x145,7	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90309	00	CWLR015	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR015	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR015	630	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR016	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR016	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR016	630	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR017	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR017	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR017	631	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR018	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR018	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR018	631	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR019	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR019	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR019	631	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR020	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90309	00	CWLR020	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90309	00	CWLR020	631	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR021	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR021	632	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR022	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR022	632	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR023	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR023	632	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR024	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR024	632	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR025	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR025	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR026	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR026	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR026	636	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR027	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR027	782	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90316	00	CWLR028	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90316	00	CWLR028	783	1	PL4x145,7	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90317	00	CWLH103	822	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH103	823	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH103	824	2	PL4x28	S235JR
123A90-FDL-ST-DD-90317	00	CWLH103	825	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH103	826	1	PL8x150	S275JR
123A90-FDL-ST-DD-90317	00	CWLH103	827	1	PL6x50	S275JR
123A90-FDL-ST-DD-90317	00	CWLH103	828	2	D25	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH103	829	2	PL10x40	S275JR
123A90-FDL-ST-DD-90317	00	CWLH103	830	2	PL10x40	S275JR
123A90-FDL-ST-DD-90317	00	CWLH103	831	4	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH103	832	2	PL4x43	S275JR
123A90-FDL-ST-DD-90317	00	CWLH104	822	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH104	823	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH104	824	2	PL4x28	S235JR
123A90-FDL-ST-DD-90317	00	CWLH104	825	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH104	826	1	PL8x150	S275JR
123A90-FDL-ST-DD-90317	00	CWLH104	827	1	PL6x50	S275JR
123A90-FDL-ST-DD-90317	00	CWLH104	828	2	D25	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH104	829	2	PL10x40	S275JR
123A90-FDL-ST-DD-90317	00	CWLH104	830	2	PL10x40	S275JR
123A90-FDL-ST-DD-90317	00	CWLH104	831	4	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90317	00	CWLH104	832	2	PL4x43	S275JR
123A90-FDL-ST-DD-90324	00	CWUH001	637	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	639	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90324	00	CWUH001	642	1	PL8x150	S275JR
123A90-FDL-ST-DD-90324	00	CWUH001	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH001	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90324	00	CWUH001	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90324	00	CWUH002	637	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	639	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90324	00	CWUH002	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90324	00	CWUH002	642	1	PL8x150	S275JR
123A90-FDL-ST-DD-90324	00	CWUH002	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90324	00	CWUH002	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90324	00	CWUH002	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90325	00	CWUH003	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90325	00	CWUH003	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90325	00	CWUH003	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90325	00	CWUH003	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH003	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90325	00	CWUH004	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90325	00	CWUH004	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90325	00	CWUH004	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90325	00	CWUH004	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90325	00	CWUH004	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90326	00	CWUH005	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH005	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90326	00	CWUH005	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH005	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH005	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH005	716	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90326	00	CWUH005	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90326	00	CWUH005	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90326	00	CWUH005	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH005	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90326	00	CWUH006	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90326	00	CWUH006	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90326	00	CWUH006	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90326	00	CWUH006	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90326	00	CWUH006	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90327	00	CWUH007	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90327	00	CWUH007	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90327	00	CWUH007	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90327	00	CWUH007	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH007	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90327	00	CWUH008	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90327	00	CWUH008	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90327	00	CWUH008	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90327	00	CWUH008	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90327	00	CWUH008	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90328	00	CWUH009	640	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90328	00	CWUH009	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90328	00	CWUH009	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH009	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH009	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH009	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH009	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90328	00	CWUH009	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90328	00	CWUH009	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH009	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90328	00	CWUH010	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90328	00	CWUH010	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90328	00	CWUH010	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90328	00	CWUH010	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90328	00	CWUH010	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90329	00	CWUH011	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90329	00	CWUH011	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90329	00	CWUH011	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90329	00	CWUH011	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH011	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90329	00	CWUH012	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH012	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90329	00	CWUH012	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH012	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH012	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH012	716	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90329	00	CWUH012	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90329	00	CWUH012	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90329	00	CWUH012	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90329	00	CWUH012	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90330	00	CWUH013	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90330	00	CWUH013	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90330	00	CWUH013	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90330	00	CWUH013	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH013	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90330	00	CWUH014	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90330	00	CWUH014	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90330	00	CWUH014	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90330	00	CWUH014	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90330	00	CWUH014	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90331	00	CWUH015	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90331	00	CWUH015	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90331	00	CWUH015	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90331	00	CWUH015	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH015	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90331	00	CWUH016	640	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90331	00	CWUH016	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90331	00	CWUH016	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH016	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH016	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH016	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH016	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90331	00	CWUH016	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90331	00	CWUH016	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90331	00	CWUH016	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90332	00	CWUH017	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90332	00	CWUH017	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90332	00	CWUH017	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90332	00	CWUH017	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH017	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90332	00	CWUH018	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90332	00	CWUH018	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90332	00	CWUH018	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90332	00	CWUH018	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90332	00	CWUH018	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90333	00	CWUH019	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH019	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90333	00	CWUH019	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH019	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH019	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH019	716	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90333	00	CWUH019	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90333	00	CWUH019	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90333	00	CWUH019	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH019	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90333	00	CWUH020	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90333	00	CWUH020	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90333	00	CWUH020	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90333	00	CWUH020	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90333	00	CWUH020	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90334	00	CWUH021	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90334	00	CWUH021	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	654	1	PL8x150	S275JR
123A90-FDL-ST-DD-90334	00	CWUH021	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90334	00	CWUH021	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH021	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90334	00	CWUH022	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90334	00	CWUH022	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90334	00	CWUH022	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90334	00	CWUH022	760	6	BROOCH PIN	ELASTICSTEEL

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90334	00	CWUH022	962	1	PL8x150	S275JR
123A90-FDL-ST-DD-90335	00	CWUH023	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90335	00	CWUH023	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90335	00	CWUH023	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH023	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90335	00	CWUH023	763	1	PL8x150	S275JR
123A90-FDL-ST-DD-90335	00	CWUH024	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90335	00	CWUH024	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	678	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	679	1	PL8x150	S275JR
123A90-FDL-ST-DD-90335	00	CWUH024	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90335	00	CWUH024	753	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90335	00	CWUH024	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90336	00	CWUH025	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90336	00	CWUH025	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90336	00	CWUH025	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90336	00	CWUH025	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH025	961	1	PL8x150	S275JR
123A90-FDL-ST-DD-90336	00	CWUH026	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90336	00	CWUH026	643	3	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90336	00	CWUH026	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90336	00	CWUH026	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90336	00	CWUH026	871	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90336	00	CWUH026	960	1	PL8x150	S275JR
123A90-FDL-ST-DD-90337	00	CWUH027	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90337	00	CWUH027	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90337	00	CWUH027	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90337	00	CWUH027	875	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	876	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH027	877	1	PL8x150	S275JR
123A90-FDL-ST-DD-90337	00	CWUH032	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90337	00	CWUH032	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	644	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90337	00	CWUH032	752	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	753	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90337	00	CWUH032	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90337	00	CWUH032	959	1	PL8x150	S275JR
123A90-FDL-ST-DD-90338	00	CWUH028	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH028	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90338	00	CWUH028	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH028	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH028	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH028	716	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90338	00	CWUH028	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90338	00	CWUH028	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90338	00	CWUH028	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH028	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90338	00	CWUH029	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90338	00	CWUH029	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90338	00	CWUH029	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90338	00	CWUH029	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90338	00	CWUH029	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90339	00	CWUH030	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90339	00	CWUH030	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90339	00	CWUH030	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90339	00	CWUH030	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH030	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90339	00	CWUH031	640	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90339	00	CWUH031	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	644	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90339	00	CWUH031	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90339	00	CWUH031	761	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90339	00	CWUH031	762	1	PL8x150	S275JR
123A90-FDL-ST-DD-90340	00	CWUH033	640	3	PD73x9,52	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90340	00	CWUH033	641	3	PL5x42	S275JR
123A90-FDL-ST-DD-90340	00	CWUH033	643	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH033	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH033	716	3	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH033	717	3	PL10x81,2	S275JR
123A90-FDL-ST-DD-90340	00	CWUH033	760	6	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90340	00	CWUH033	764	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH033	765	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH033	874	1	PL8x150	S275JR
123A90-FDL-ST-DD-90340	00	CWUH034	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90340	00	CWUH034	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90340	00	CWUH034	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90340	00	CWUH034	839	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	840	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90340	00	CWUH034	841	1	PL8x150	S275JR
123A90-FDL-ST-DD-90341	00	CWUH035	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90341	00	CWUH035	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90341	00	CWUH035	751	2	PL8x40	S275JR
123A90-FDL-ST-DD-90341	00	CWUH035	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90341	00	CWUH035	834	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	835	1	PL8x150	S275JR
123A90-FDL-ST-DD-90341	00	CWUH035	836	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	837	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	838	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90341	00	CWUH035	878	1	PL8x150	S275JR
123A90-FDL-ST-DD-90342	00	CWUH036	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH036	641	2	PL5x42	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90342	00	CWUH036	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH036	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH036	695	1	PL8x150	S275JR
123A90-FDL-ST-DD-90342	00	CWUH036	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH036	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90342	00	CWUH036	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90342	00	CWUH036	842	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH036	843	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90342	00	CWUH037	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	676	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90342	00	CWUH037	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90342	00	CWUH037	807	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90342	00	CWUH037	809	1	PL8x150	S275JR
123A90-FDL-ST-DD-90342	00	CWUH037	810	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90343	00	CWUH038	643	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90343	00	CWUH038	751	2	PL8x40	S275JR
123A90-FDL-ST-DD-90343	00	CWUH038	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90343	00	CWUH038	809	1	PL8x150	S275JR
123A90-FDL-ST-DD-90343	00	CWUH038	838	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	872	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	873	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90343	00	CWUH038	878	1	PL8x150	S275JR
123A90-FDL-ST-DD-90344	00	CWUH039	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH039	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH039	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH039	723	1	PL10x134	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90344	00	CWUH040	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH040	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH040	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH040	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH041	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH041	721	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH041	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH041	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH042	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH042	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH042	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH042	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH043	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH043	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH043	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH043	844	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH044	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH044	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH044	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH044	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH045	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH045	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH045	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH045	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH046	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH046	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH046	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH046	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90344	00	CWUH047	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90344	00	CWUH047	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90344	00	CWUH047	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90344	00	CWUH047	734	1	PL10x384	S275JR
123A90-FDL-ST-DD-90345	00	CWUH048	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90345	00	CWUH048	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90345	00	CWUH048	723	1	PL10x134	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90345	00	CWUH048	739	1	PL10x384	S275JR
123A90-FDL-ST-DD-90345	00	CWUH049	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90345	00	CWUH049	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90345	00	CWUH049	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90345	00	CWUH049	739	1	PL10x384	S275JR
123A90-FDL-ST-DD-90345	00	CWUH050	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90345	00	CWUH050	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90345	00	CWUH050	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90345	00	CWUH050	854	1	PL10x384	S275JR
123A90-FDL-ST-DD-90346	00	CWUH051	720	1	PL10x238	S275JR
123A90-FDL-ST-DD-90346	00	CWUH051	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90346	00	CWUH051	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90346	00	CWUH051	870	1	PL10x384	S275JR
123A90-FDL-ST-DD-90346	00	CWUH052	722	1	PL10x250	S275JR
123A90-FDL-ST-DD-90346	00	CWUH052	723	1	PL10x134	S275JR
123A90-FDL-ST-DD-90346	00	CWUH052	733	1	PL10x238	S275JR
123A90-FDL-ST-DD-90346	00	CWUH052	864	1	PL10x384	S275JR
123A90-FDL-ST-DD-90347	00	CWUH054	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90347	00	CWUH054	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90347	00	CWUH054	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	845	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	846	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH054	849	1	PL8x150	S275JR
123A90-FDL-ST-DD-90347	00	CWUH055	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90347	00	CWUH055	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	735	2	PL6x105	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90347	00	CWUH055	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	845	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	846	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90347	00	CWUH055	851	1	PL8x150	S275JR
123A90-FDL-ST-DD-90348	00	CWUH056	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90348	00	CWUH056	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90348	00	CWUH056	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	845	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	846	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH056	862	1	PL8x150	S275JR
123A90-FDL-ST-DD-90348	00	CWUH057	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90348	00	CWUH057	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90348	00	CWUH057	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	855	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	856	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90348	00	CWUH057	857	1	PL8x150	S275JR
123A90-FDL-ST-DD-90349	00	CWUH058	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90349	00	CWUH058	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90349	00	CWUH058	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	863	1	PL8x150	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90349	00	CWUH058	865	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH058	866	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90349	00	CWUH059	725	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	726	3	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	727	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	730	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	731	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90349	00	CWUH059	740	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	867	1	PL8x150	S275JR
123A90-FDL-ST-DD-90349	00	CWUH059	868	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90349	00	CWUH059	869	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90350	00	CWUH060	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90350	00	CWUH060	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90350	00	CWUH060	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90350	00	CWUH060	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90350	00	CWUH060	847	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90350	00	CWUH060	848	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90350	00	CWUH060	850	1	PL8x150	S275JR
123A90-FDL-ST-DD-90351	00	CWUH061	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90351	00	CWUH061	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH061	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90351	00	CWUH061	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH061	859	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH061	860	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH061	861	1	PL8x150	S275JR
123A90-FDL-ST-DD-90351	00	CWUH062	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90351	00	CWUH062	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH062	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90351	00	CWUH062	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH062	859	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH062	860	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH062	861	1	PL8x150	S275JR
123A90-FDL-ST-DD-90351	00	CWUH063	724	2	PL8x190	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90351	00	CWUH063	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH063	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90351	00	CWUH063	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH063	859	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH063	860	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH063	861	1	PL8x150	S275JR
123A90-FDL-ST-DD-90351	00	CWUH064	724	2	PL8x190	S275JR
123A90-FDL-ST-DD-90351	00	CWUH064	726	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH064	735	2	PL6x105	S275JR
123A90-FDL-ST-DD-90351	00	CWUH064	740	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH064	859	1	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH064	860	2	PD114,3X8,56	API5LGRB
123A90-FDL-ST-DD-90351	00	CWUH064	861	1	PL8x150	S275JR
123A90-FDL-ST-DD-90352	00	CWUH065	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH066	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH067	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH068	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH069	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH070	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH071	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH072	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH073	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH074	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH075	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH076	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH077	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH078	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH079	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH080	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH081	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH082	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH083	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH084	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH085	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH086	780	2	PL6x50	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90352	00	CWUH087	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH088	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH089	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH090	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH091	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH092	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH093	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH094	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH095	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH096	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH097	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH098	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90352	00	CWUH099	780	2	PL6x50	S275JR
123A90-FDL-ST-DD-90371	00	CWUF001	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF002	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF003	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF004	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF005	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF006	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF007	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF008	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF009	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF010	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF011	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF012	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF013	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF014	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF015	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF016	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF017	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90371	00	CWUF018	793	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90372	00	CWUF019	794	1	PL8x1970	S355J2
123A90-FDL-ST-DD-90372	00	CWUF020	794	1	PL8x1970	S355J2
123A90-FDL-ST-DD-90372	00	CWUF021	795	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90373	00	CWUF022	964	1	PL8x2010	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90373	00	CWUF023	796	1	PL8x1700	S355J2
123A90-FDL-ST-DD-90373	00	CWUF024	965	1	PL8x1700	S355J2
123A90-FDL-ST-DD-90374	00	CWUF025	797	1	PL8x1565	S355J2
123A90-FDL-ST-DD-90374	00	CWUF026	966	1	PL8x1565	S355J2
123A90-FDL-ST-DD-90374	00	CWUF027	971	1	PL8x1565	S355J2
123A90-FDL-ST-DD-90375	00	CWUF028	972	1	PL8x1565	S355J2
123A90-FDL-ST-DD-90375	00	CWUF029	798	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90375	00	CWUF030	967	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90376	00	CWUF031	968	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90376	00	CWUF032	969	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90376	00	CWUF033	799	1	PL8x860	S355J2
123A90-FDL-ST-DD-90376	00	CWUF035	799	1	PL8x860	S355J2
123A90-FDL-ST-DD-90377	00	CWUF034	799	1	PL8x860	S355J2
123A90-FDL-ST-DD-90377	00	CWUF036	799	1	PL8x860	S355J2
123A90-FDL-ST-DD-90377	00	CWUF037	800	1	PL8x1798	S355J2
123A90-FDL-ST-DD-90377	00	CWUF038	800	1	PL8x1798	S355J2
123A90-FDL-ST-DD-90377	00	CWUF039	800	1	PL8x1798	S355J2
123A90-FDL-ST-DD-90377	00	CWUF040	800	1	PL8x1798	S355J2
123A90-FDL-ST-DD-90378	00	CWUF041	801	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90378	00	CWUF042	970	1	PL8x2010	S355J2
123A90-FDL-ST-DD-90378	00	CWUF043	802	1	PL8x1660	S355J2
123A90-FDL-ST-DD-90379	00	CWUF044	973	1	PL8x1660	S355J2
123A90-FDL-ST-DD-90379	00	CWUF045	803	1	PL10x1638	S355J2
123A90-FDL-ST-DD-90380	00	CWUF046	804	1	PL10x1568	S355J2
123A90-FDL-ST-DD-90380	00	CWUF047	805	1	PL10x1426	S355J2
123A90-FDL-ST-DD-90380	00	CWUF048	806	1	PL10x1622	S355J2
123A90-FDL-ST-DD-90386	00	CWUR001	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR001	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR002	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR002	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR003	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR003	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR004	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR004	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR005	628	1	PL4x145,7	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90386	00	CWUR005	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR006	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR006	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR007	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR007	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR008	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR008	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR009	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR009	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	00	CWUR010	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	00	CWUR010	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR011	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR011	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR012	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR012	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR013	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR013	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR014	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR014	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR015	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR015	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR016	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR016	1669	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90386	01	CWUR017	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90386	01	CWUR017	1670	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR019	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR019	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR019	1047	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR020	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR020	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR020	1047	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR022	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR022	1048	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR023	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR023	1048	1	PL4x145,7	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90387	01	CWUR025	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR025	1049	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR026	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR026	1049	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR027	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR027	1049	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90387	01	CWUR028	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90387	01	CWUR028	1049	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90388	00	CWUR029	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90388	00	CWUR029	1050	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90388	00	CWUR030	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90388	00	CWUR030	1050	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90388	00	CWUR031	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90388	00	CWUR031	1051	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90388	00	CWUR032	628	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90388	00	CWUR032	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90388	00	CWUR032	1052	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90389	00	CWUR033	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90389	00	CWUR033	1053	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90389	00	CWUR034	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90389	00	CWUR034	1054	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90392	00	CWWN081	941	1	UNP220	S355J2
123A90-FDL-ST-DD-90404	00	CWWN079	940	1	UNP220	S355J2
123A90-FDL-ST-DD-90404	00	CWWN080	940	1	UNP220	S355J2
123A90-FDL-ST-DD-90409	00	CWWN078	931	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1055	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1056	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1060	2	L70*5	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1061	1	L150*100*10	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1064	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1065	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1066	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1067	1	UNP220	S355J2
123A90-FDL-ST-DD-90416	00	CWWN082	1068	17	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90417	00	CWWN083	1057	1	UNP220	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90417	00	CWWN083	1058	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1059	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1060	2	L70*5	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1062	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1063	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1065	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1066	1	UNP220	S355J2
123A90-FDL-ST-DD-90417	00	CWWN083	1068	17	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90419	00	CWWS074	941	1	UNP220	S355J2
123A90-FDL-ST-DD-90428	00	CWWS072	940	1	UNP220	S355J2
123A90-FDL-ST-DD-90428	00	CWWS073	940	1	UNP220	S355J2
123A90-FDL-ST-DD-90435	00	CWWS081	1079	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1057	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1058	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1059	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1060	2	L70*5	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1062	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1063	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1065	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1066	1	UNP220	S355J2
123A90-FDL-ST-DD-90444	00	CWWS082	1068	17	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90445	00	CWWS083	1055	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1056	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1060	2	L70*5	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1061	1	L150*100*10	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1064	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1065	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1066	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1067	1	UNP220	S355J2
123A90-FDL-ST-DD-90445	00	CWWS083	1068	17	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90498	02	CWLH112	1187	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1188	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1189	4	PL5x28	S235JR
123A90-FDL-ST-DD-90498	02	CWLH112	1190	2	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1191	1	PL8x150	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90498	02	CWLH112	1192	4	D25	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1193	4	PL8x40	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1195	8	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1196	2	PL5x43	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1197	4	PL8x40	BRONZE
123A90-FDL-ST-DD-90498	02	CWLH112	1198	4	PL8x40	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1199	1	ROD16	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1200	1	ROD16	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1201	8	PL8x40	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1202	2	PL8x30	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1626	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1627	2	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1628	1	PL8x150	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1683	2	PL8x30	S275JR
123A90-FDL-ST-DD-90498	02	CWLH112	1684	2	ROD16	API5LGRB
123A90-FDL-ST-DD-90498	02	CWLH112	1685	2	PL8x10	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1187	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1188	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1189	4	PL5x28	S235JR
123A90-FDL-ST-DD-90499	02	CWLH113	1190	2	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1191	1	PL8x150	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1192	4	D25	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1193	4	PL8x40	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1195	8	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1196	2	PL5x43	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1197	4	PL8x40	BRONZE
123A90-FDL-ST-DD-90499	02	CWLH113	1198	4	PL8x40	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1199	1	ROD16	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1200	1	ROD16	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1201	8	PL8x40	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1202	2	PL8x30	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1626	1	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1627	2	PD33,4X3,38	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1628	1	PL8x150	S275JR
123A90-FDL-ST-DD-90499	02	CWLH113	1683	2	PL8x30	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90499	02	CWLH113	1684	2	ROD16	API5LGRB
123A90-FDL-ST-DD-90499	02	CWLH113	1685	2	PL8x10	S275JR
123A90-FDL-ST-DD-90500	00	CWLH114	1204	1	UNP300	S275JR
123A90-FDL-ST-DD-90500	00	CWLH114	1205	2	PL10x186,2	S275JR
123A90-FDL-ST-DD-90501	00	CWLH115	1204	1	UNP300	S275JR
123A90-FDL-ST-DD-90501	00	CWLH115	1205	2	PL10x186,2	S275JR
123A90-FDL-ST-DD-90502	01	CWLH105	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90502	01	CWLH105	643	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90502	01	CWLH105	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90502	01	CWLH105	1629	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	1630	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH105	1631	1	PL8x150	S275JR
123A90-FDL-ST-DD-90502	01	CWLH106	640	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90502	01	CWLH106	643	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	676	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90502	01	CWLH106	760	4	BROOCH PIN	ELASTICSTEEL
123A90-FDL-ST-DD-90502	01	CWLH106	1174	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	1175	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90502	01	CWLH106	1176	1	PL8x150	S275JR
123A90-FDL-ST-DD-90503	01	CWLH110	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90503	01	CWLH110	651	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH110	665	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH110	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH110	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90503	01	CWLH110	760	4	D5	ELASTICSTEEL
123A90-FDL-ST-DD-90503	01	CWLH110	1183	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH110	1184	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH110	1185	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90503	01	CWLH110	1186	1	PL8x150	S275JR
123A90-FDL-ST-DD-90503	01	CWLH111	641	2	PL5x42	S275JR
123A90-FDL-ST-DD-90503	01	CWLH111	651	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH111	716	2	PD73x9,52	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH111	717	2	PL10x81,2	S275JR
123A90-FDL-ST-DD-90503	01	CWLH111	760	4	D5	ELASTICSTEEL
123A90-FDL-ST-DD-90503	01	CWLH111	1178	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH111	1179	1	PL8x150	S275JR
123A90-FDL-ST-DD-90503	01	CWLH111	1180	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH111	1181	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90503	01	CWLH111	1182	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1206	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1220	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1221	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH001	1292	1	PL10x94,2	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH001	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH001	1294	1	PL8x150	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH001	1295	1	PL10x140	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH007	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH007	1212	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH007	1215	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH007	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH007	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90509	00	CWWNH007	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH007	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90509	00	CWWNH007	1296	1	PL8x150	S275JR
123A90-FDL-ST-DD-90510	00	CWWNH012	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1231	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1234	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1235	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90510	00	CWWNH012	1292	3	PL10x94,3	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90510	00	CWWNH012	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90510	00	CWWNH012	1299	1	PL8x150	S275JR
123A90-FDL-ST-DD-90510	00	CWWNH012	1301	1	PL8x150	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90511	00	CWWNH003	1235	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90511	00	CWWNH003	1246	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90511	00	CWWNH003	1249	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90511	00	CWWNH003	1250	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90511	00	CWWNH003	1292	2	PL10x94,2	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1302	1	PL8x150	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1304	1	PL8x150	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1305	4	PL8x40	S275JR
123A90-FDL-ST-DD-90511	00	CWWNH003	1314	1	PL8x150	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH005	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH005	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH005	1255	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH005	1258	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH005	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH005	1307	1	PL8x150	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH005	1308	2	PL10x98,4	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH006	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH006	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH006	1255	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH006	1258	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90512	00	CWWNH006	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH006	1307	1	PL8x150	S275JR
123A90-FDL-ST-DD-90512	00	CWWNH006	1308	2	PL10x98,4	S275JR
123A90-FDL-ST-DD-90513	00	CWWNH010	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1222	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1228	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1229	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90513	00	CWWNH010	1292	3	PL10x94,3	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90513	00	CWWNH010	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90513	00	CWWNH010	1297	1	PL8x150	S275JR
123A90-FDL-ST-DD-90513	00	CWWNH010	1298	1	PL8x150	S275JR
123A90-FDL-ST-DD-90513	00	CWWNH010	1304	1	PL8x150	S275JR
123A90-FDL-ST-DD-90513	00	CWWNH010	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1228	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1229	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1237	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90514	00	CWWNH011	1292	3	PL10x94,3	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1297	1	PL8x150	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1298	1	PL8x150	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90514	00	CWWNH011	1314	1	PL8x150	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH002	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH002	1221	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH002	1265	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH002	1269	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH002	1292	2	PL10x94,2	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1311	1	PL8x150	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1312	1	PL10x140	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH002	1315	1	PL8x132,4	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH008	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH008	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH008	1260	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH008	1262	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH008	1263	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90515	00	CWWNH008	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90515	00	CWWNH008	1295	3	PL10x140	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90515	00	CWWNH008	1309	1	PL8x150	S275JR
123A90-FDL-ST-DD-90516	00	CWWNH009	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90516	00	CWWNH009	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90516	00	CWWNH009	1279	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90516	00	CWWNH009	1280	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90516	00	CWWNH009	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90516	00	CWWNH009	1295	2	PL10x140	S275JR
123A90-FDL-ST-DD-90516	00	CWWNH009	1310	1	PL8x150	S275JR
123A90-FDL-ST-DD-90516	00	CWWNH009	1316	1	PL8x150	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90517	00	CWWNH004	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90517	00	CWWNH004	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90517	00	CWWNH004	1282	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90517	00	CWWNH004	1283	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90517	00	CWWNH004	1292	1	PL10x94,2	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1295	1	PL10x140	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1315	1	PL8x132,4	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1317	1	PL8x150	S275JR
123A90-FDL-ST-DD-90517	00	CWWNH004	1318	1	PL8x150	S275JR
123A90-FDL-ST-DD-90518	00	CWWNH013	1239	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90518	00	CWWNH013	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90518	00	CWWNH013	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90518	00	CWWNH013	1244	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90518	00	CWWNH013	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90518	00	CWWNH013	1303	1	PL8x150	S275JR
123A90-FDL-ST-DD-90519	00	CWWNH014	1239	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90519	00	CWWNH014	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90519	00	CWWNH014	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90519	00	CWWNH014	1244	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90519	00	CWWNH014	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90519	00	CWWNH014	1306	1	PL8x150	S275JR
123A90-FDL-ST-DD-90520	00	CWWNH015	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1243	1	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90520	00	CWWNH015	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1271	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1272	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1273	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1277	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90520	00	CWWNH015	1313	1	PL8x150	S275JR
123A90-FDL-ST-DD-90521	00	CWWNH016	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1270	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1271	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1272	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1273	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90521	00	CWWNH016	1313	1	PL8x150	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH001	1206	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH001	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH001	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH001	1220	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH001	1221	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH001	1292	1	PL10x94,2	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH001	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH001	1294	1	PL8x150	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH001	1295	1	PL10x140	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH007	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH007	1212	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH007	1215	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH007	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH007	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90522	00	CWWSH007	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH007	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90522	00	CWWSH007	1296	1	PL8x150	S275JR
123A90-FDL-ST-DD-90523	00	CWWSH012	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90523	00	CWWSH012	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90523	00	CWWSH012	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90523	00	CWWSH012	1234	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90523	00	CWWSH012	1235	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90523	00	CWWSH012	1288	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90523	00	CWWSH012	1292	3	PL10x94,3	S275JR
123A90-FDL-ST-DD-90523	00	CWWSH012	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90523	00	CWWSH012	1299	1	PL8x150	S275JR
123A90-FDL-ST-DD-90523	00	CWWSH012	1301	1	PL8x150	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90524	00	CWWSH003	1235	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90524	00	CWWSH003	1246	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90524	00	CWWSH003	1249	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90524	00	CWWSH003	1250	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90524	00	CWWSH003	1292	2	PL10x94,2	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1302	1	PL8x150	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1304	1	PL8x150	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1305	4	PL8x40	S275JR
123A90-FDL-ST-DD-90524	00	CWWSH003	1314	1	PL8x150	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH005	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH005	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH005	1255	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH005	1258	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH005	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH005	1307	1	PL8x150	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH005	1308	2	PL10x98,4	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH006	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH006	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH006	1255	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH006	1258	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90525	00	CWWSH006	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH006	1307	1	PL8x150	S275JR
123A90-FDL-ST-DD-90525	00	CWWSH006	1308	2	PL10x98,4	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90526	00	CWWSH010	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90526	00	CWWSH010	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90526	00	CWWSH010	1228	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90526	00	CWWSH010	1229	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90526	00	CWWSH010	1287	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90526	00	CWWSH010	1292	3	PL10x94,3	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1297	1	PL8x150	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1298	1	PL8x150	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1304	1	PL8x150	S275JR
123A90-FDL-ST-DD-90526	00	CWWSH010	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1224	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1225	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1228	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1229	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1289	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90527	00	CWWSH011	1292	3	PL10x94,3	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1297	1	PL8x150	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1298	1	PL8x150	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90527	00	CWWSH011	1314	1	PL8x150	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH002	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH002	1221	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH002	1265	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH002	1269	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH002	1292	2	PL10x94,2	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1311	1	PL8x150	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1312	1	PL10x140	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH002	1315	1	PL8x132,4	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH008	1207	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH008	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH008	1260	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH008	1262	4	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90528	00	CWWSH008	1263	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90528	00	CWWSH008	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH008	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90528	00	CWWSH008	1309	1	PL8x150	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90529	00	CWWSH004	1217	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90529	00	CWWSH004	1219	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90529	00	CWWSH004	1283	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90529	00	CWWSH004	1291	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90529	00	CWWSH004	1292	1	PL10x94,2	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1295	1	PL10x140	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1305	2	PL8x40	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1315	1	PL8x132,4	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1317	1	PL8x150	S275JR
123A90-FDL-ST-DD-90529	00	CWWSH004	1318	1	PL8x150	S275JR
123A90-FDL-ST-DD-90530	00	CWWSH009	1207	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90530	00	CWWSH009	1217	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90530	00	CWWSH009	1280	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90530	00	CWWSH009	1290	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90530	00	CWWSH009	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90530	00	CWWSH009	1295	2	PL10x140	S275JR
123A90-FDL-ST-DD-90530	00	CWWSH009	1310	1	PL8x150	S275JR
123A90-FDL-ST-DD-90530	00	CWWSH009	1316	1	PL8x150	S275JR
123A90-FDL-ST-DD-90531	00	CWWSH013	1239	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90531	00	CWWSH013	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90531	00	CWWSH013	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90531	00	CWWSH013	1244	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90531	00	CWWSH013	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90531	00	CWWSH013	1303	1	PL8x150	S275JR
123A90-FDL-ST-DD-90532	00	CWWSH014	1239	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90532	00	CWWSH014	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90532	00	CWWSH014	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90532	00	CWWSH014	1244	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90532	00	CWWSH014	1245	1	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90532	00	CWWSH014	1306	1	PL8x150	S275JR
123A90-FDL-ST-DD-90533	00	CWWSH015	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1271	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1272	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1273	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1277	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90533	00	CWWSH015	1313	1	PL8x150	S275JR
123A90-FDL-ST-DD-90534	00	CWWSH016	1242	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1243	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1245	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1270	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1271	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1272	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1273	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90534	00	CWWSH016	1313	1	PL8x150	S275JR
123A90-FDL-ST-DD-90578	00	CWTPW049	1068	14	PL30x300	S235JR
123A90-FDL-ST-DD-90578	00	CWTPW049	1351	1	UNP220	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1385	2	L70*5	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1386	1	L150*100*10	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1393	1	UNP220	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1394	1	UNP220	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1408	1	UNP220	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1410	1	UNP220	S355J2
123A90-FDL-ST-DD-90578	00	CWTPW049	1411	1	UNP220	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1068	13	PL30x300	S235JR
123A90-FDL-ST-DD-90579	00	CWTPW050	1352	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1385	2	L70*5	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1395	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1396	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1413	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1414	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1415	1	UNP260	S355J2
123A90-FDL-ST-DD-90579	00	CWTPW050	1416	2	L80x60x8	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90579	00	CWTPW050	1417	2	L80x60x8	S355J2
123A90-FDL-ST-DD-90607	00	CWTPH001	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH001	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH001	1508	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH001	1509	1	PL8x150	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH001	1510	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH001	1511	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH001	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH002	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH002	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH002	1508	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH002	1509	1	PL8x150	S275JR
123A90-FDL-ST-DD-90607	00	CWTPH002	1510	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH002	1511	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90607	00	CWTPH002	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH003	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH003	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH003	1510	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH003	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH003	1517	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH003	1518	1	PL8x150	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH003	1519	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH004	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH004	1295	3	PL10x140	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH004	1510	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH004	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH004	1517	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90608	00	CWTPH004	1518	1	PL8x150	S275JR
123A90-FDL-ST-DD-90608	00	CWTPH004	1519	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1292	2	PL10x94,3	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH006	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH006	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1532	2	PL8x40	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH006	1547	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1548	1	PL8x150	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90609	00	CWTPH006	1549	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1550	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1551	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1552	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH006	1553	1	PL8x150	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH009	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH009	1295	2	PL10x140	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH009	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH009	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH009	1554	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90609	00	CWTPH009	1555	1	PL8x150	S275JR
123A90-FDL-ST-DD-90609	00	CWTPH009	1556	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90610	00	CWTPH010	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90610	00	CWTPH010	1295	2	PL10x140	S275JR
123A90-FDL-ST-DD-90610	00	CWTPH010	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90610	00	CWTPH010	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90610	00	CWTPH010	1557	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90610	00	CWTPH010	1558	1	PL8x150	S275JR
123A90-FDL-ST-DD-90610	00	CWTPH010	1559	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90611	00	CWTPH016	1292	2	PL10x94,3	S275JR
123A90-FDL-ST-DD-90611	00	CWTPH016	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90611	00	CWTPH016	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90611	00	CWTPH016	1515	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90611	00	CWTPH016	1532	2	PL8x40	S275JR
123A90-FDL-ST-DD-90611	00	CWTPH016	1540	1	PL8x150	S275JR
123A90-FDL-ST-DD-90611	00	CWTPH016	1543	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90611	00	CWTPH016	1544	1	PL8x150	S275JR
123A90-FDL-ST-DD-90611	00	CWTPH016	1545	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90611	00	CWTPH016	1546	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH005	1292	2	PL10x94,3	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH005	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH005	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH005	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH005	1537	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH005	1538	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90612	00	CWTPH005	1539	1	PL8x150	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1292	2	PL10x94,3	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH007	1531	1	PL8x150	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1532	2	PL8x40	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1566	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH007	1567	1	PL8x150	S275JR
123A90-FDL-ST-DD-90612	00	CWTPH007	1568	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH007	1569	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90612	00	CWTPH007	1570	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90613	00	CWTPH008	1292	2	PL10x94,3	S275JR
123A90-FDL-ST-DD-90613	00	CWTPH008	1293	2	PL5x42	S275JR
123A90-FDL-ST-DD-90613	00	CWTPH008	1510	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90613	00	CWTPH008	1515	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90613	00	CWTPH008	1533	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90613	00	CWTPH008	1534	1	PL8x150	S275JR
123A90-FDL-ST-DD-90613	00	CWTPH008	1535	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90613	00	CWTPH008	1536	1	PL8x150	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1292	3	PL10x94,3	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1293	3	PL5x42	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1510	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90614	00	CWTPH011	1515	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90614	00	CWTPH011	1525	1	PL8x150	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1526	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90614	00	CWTPH011	1530	1	PL8x150	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1531	1	PL8x150	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1532	2	PL8x40	S275JR
123A90-FDL-ST-DD-90614	00	CWTPH011	1570	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90614	00	CWTPH011	1571	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90614	00	CWTPH011	1572	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90615	00	CWTPH012	1520	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90615	00	CWTPH012	1521	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90615	00	CWTPH012	1522	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90615	00	CWTPH012	1523	6	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90615	00	CWTPH012	1524	1	PL8x150	S275JR
123A90-FDL-ST-DD-90616	00	CWTPH013	1520	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90616	00	CWTPH013	1521	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90616	00	CWTPH013	1522	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90616	00	CWTPH013	1523	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90616	00	CWTPH013	1524	1	PL8x150	S275JR
123A90-FDL-ST-DD-90617	00	CWTPH014	1521	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90617	00	CWTPH014	1532	2	PL8x40	S275JR
123A90-FDL-ST-DD-90617	00	CWTPH014	1560	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90617	00	CWTPH014	1561	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90617	00	CWTPH014	1562	1	PL8x150	S275JR
123A90-FDL-ST-DD-90617	00	CWTPH014	1573	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90617	00	CWTPH014	1574	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90617	00	CWTPH014	1575	1	PL8x150	S275JR
123A90-FDL-ST-DD-90618	00	CWTPH015	1521	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90618	00	CWTPH015	1561	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90618	00	CWTPH015	1563	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90618	00	CWTPH015	1564	6	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90618	00	CWTPH015	1565	1	PL8x150,2	S275JR
123A90-FDL-ST-DD-90618	00	CWTPH015	1576	1	PL8x150	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE031	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE032	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE033	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE034	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE035	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE036	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE037	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE038	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE039	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE040	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE041	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE042	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE043	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE044	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90641	00	CWUTE045	1642	1	PL5x40	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90641	00	CWUTE046	1642	1	PL5x40	S275JR
123A90-FDL-ST-DD-90645	00	CWUR035	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90645	00	CWUR035	1054	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90645	00	CWUR036	629	2	PL4x20,9	S275JR
123A90-FDL-ST-DD-90645	00	CWUR036	1671	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90646	00	CWUF049	1643	1	PL8x1571	S355J2
123A90-FDL-ST-DD-90646	00	CWUF050	1644	1	PL8x1694	S355J2
123A90-FDL-ST-DD-90646	00	CWUF051	1668	1	PL8x1571	S355J2
123A90-FDL-ST-DD-90647	02	CWLHAT007	1675	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90647	02	CWLHAT008	1675	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90647	02	CWLHAT009	1676	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90647	02	CWLHAT010	1676	1	PL4x145,7	S275JR
123A90-FDL-ST-DD-90676	00	CWLH116	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH117	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH118	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH119	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH120	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH121	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH122	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH123	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90676	00	CWLH124	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH100	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH101	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH102	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH103	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH104	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH105	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH106	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH107	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH108	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90677	00	CWUH109	1713	2	PL8x70	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP001	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90693	01	CWUAP001	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP001	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP002	1751	1	HEB220	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90693	01	CWUAP002	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP002	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP003	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90693	01	CWUAP003	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP003	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP004	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90693	01	CWUAP004	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP004	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP044	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90693	01	CWUAP044	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90693	01	CWUAP044	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP005	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90694	01	CWUAP005	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP005	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP006	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90694	01	CWUAP006	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP006	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP043	1751	1	HEB220	S355J2
123A90-FDL-ST-DD-90694	01	CWUAP043	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90694	01	CWUAP043	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90695	01	CWUAP007	1752	1	HEB220	S355J2
123A90-FDL-ST-DD-90695	01	CWUAP007	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90695	01	CWUAP008	1752	1	HEB220	S355J2
123A90-FDL-ST-DD-90695	01	CWUAP008	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90695	01	CWUAP009	1752	1	HEB220	S355J2
123A90-FDL-ST-DD-90695	01	CWUAP009	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90695	01	CWUAP010	1752	1	HEB220	S355J2
123A90-FDL-ST-DD-90695	01	CWUAP010	1790	5	PL10x95,2	S275JR
123A90-FDL-ST-DD-90695	01	CWUAP011	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90695	01	CWUAP012	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90696	00	CWUAP013	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90696	00	CWUAP013	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90696	00	CWUAP014	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90696	00	CWUAP014	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90696	00	CWUAP015	1753	1	HEB220	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

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123A90-FDL-ST-DD-90696	00	CWUAP015	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90697	00	CWUAP016	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90697	00	CWUAP016	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90697	00	CWUAP017	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90697	00	CWUAP018	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90697	00	CWUAP018	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90697	00	CWUAP019	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90697	00	CWUAP019	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90698	00	CWUAP020	1755	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP021	1755	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP022	1755	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP023	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP024	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP025	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP026	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP027	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP028	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP029	1757	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP030	1757	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP069	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP070	1756	1	HEB220	S355J2
123A90-FDL-ST-DD-90698	00	CWUAP071	1755	1	HEB220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP031	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP032	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP033	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP034	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP034	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90699	01	CWUAP035	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP035	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90699	01	CWUAP036	1765	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP036	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90699	01	CWUAP037	1766	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP038	1766	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP039	1766	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP040	1766	1	IPE220	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

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123A90-FDL-ST-DD-90699	01	CWUAP041	1767	1	IPE220	S355J2
123A90-FDL-ST-DD-90699	01	CWUAP042	1767	1	IPE220	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP045	1807	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP046	1807	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP047	1807	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP048	1808	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP049	1808	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP050	1808	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP051	1808	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP052	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP053	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP054	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP055	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP056	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP057	1809	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP058	1810	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP059	1810	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP060	1810	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP061	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP062	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP063	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP064	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP065	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP066	1811	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP067	1812	1	IPE160	S355J2
123A90-FDL-ST-DD-90700	00	CWUAP068	1812	1	IPE160	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP072	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP073	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP080	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP096	1759	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP096	1790	4	PL10x95	S275JR
123A90-FDL-ST-DD-90701	00	CWUAP096	1826	4	PL10x44	S275JR
123A90-FDL-ST-DD-90701	00	CWUAP097	1759	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP097	1790	4	PL10x95	S275JR
123A90-FDL-ST-DD-90701	00	CWUAP097	1826	4	PL10x44	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

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123A90-FDL-ST-DD-90701	00	CWUAP098	1759	1	HEB220	S355J2
123A90-FDL-ST-DD-90701	00	CWUAP098	1790	2	PL10x95	S275JR
123A90-FDL-ST-DD-90701	00	CWUAP098	1826	2	PL10x44	S275JR
123A90-FDL-ST-DD-90702	00	CWUAP099	1759	1	HEB220	S355J2
123A90-FDL-ST-DD-90702	00	CWUAP099	1790	1	PL10x95	S275JR
123A90-FDL-ST-DD-90702	00	CWUAP099	1826	1	PL10x44	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP108	1761	1	HEB220	S355J2
123A90-FDL-ST-DD-90702	01	CWUAP108	1790	6	PL10x95	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP108	1826	2	PL10x44	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP109	1761	1	HEB220	S355J2
123A90-FDL-ST-DD-90702	01	CWUAP109	1790	4	PL10x95	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP109	1826	2	PL10x44	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP110	1761	1	HEB220	S355J2
123A90-FDL-ST-DD-90702	01	CWUAP110	1790	2	PL10x95	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP110	1826	2	PL10x44	S275JR
123A90-FDL-ST-DD-90702	01	CWUAP110	1923	1	PL10x44	S235JR
123A90-FDL-ST-DD-90702	01	CWUAP110	1924	1	PL10x95,2	S235JR
123A90-FDL-ST-DD-90703	00	CWUAP111	1761	1	HEB220	S355J2
123A90-FDL-ST-DD-90703	00	CWUAP111	1790	1	PL10x95	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP111	1826	1	PL10x44	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP112	1762	1	HEB220	S355J2
123A90-FDL-ST-DD-90703	00	CWUAP112	1790	4	PL10x95	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP112	1826	2	PL10x44	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP113	1762	1	HEB220	S355J2
123A90-FDL-ST-DD-90703	00	CWUAP113	1790	1	PL10x95	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP113	1826	1	PL10x44	S275JR
123A90-FDL-ST-DD-90703	00	CWUAP142	1776	1	HEB160	S355J2
123A90-FDL-ST-DD-90703	00	CWUAP143	1776	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP144	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP144	1921	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP145	1776	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP145	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP146	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP146	1921	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP147	1777	1	HEB160	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

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123A90-FDL-ST-DD-90704	02	CWUAP147	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP148	1777	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP148	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP149	1782	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP150	1781	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP150	1827	3	PL10x66	S275JR
123A90-FDL-ST-DD-90704	02	CWUAP151	1780	1	HEB160	S355J2
123A90-FDL-ST-DD-90704	02	CWUAP151	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90705	00	CWUAP152	1781	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP152	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90705	00	CWUAP153	1781	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP153	1827	3	PL10x66	S275JR
123A90-FDL-ST-DD-90705	00	CWUAP154	1782	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP155	1782	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP156	1782	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP157	1783	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP157	1827	1	PL10x66	S275JR
123A90-FDL-ST-DD-90705	00	CWUAP158	1784	1	HEB160	S355J2
123A90-FDL-ST-DD-90705	00	CWUAP158	1827	2	PL10x66	S275JR
123A90-FDL-ST-DD-90706	00	CWUAP159	1785	1	HEB160	S355J2
123A90-FDL-ST-DD-90706	00	CWUAP159	1827	3	PL10x66	S275JR
123A90-FDL-ST-DD-90706	00	CWUAP160	1786	1	HEB160	S355J2
123A90-FDL-ST-DD-90706	00	CWUAP161	1787	1	HEB160	S355J2
123A90-FDL-ST-DD-90706	00	CWUAP161	1827	3	PL10x66	S275JR
123A90-FDL-ST-DD-90706	00	CWUAP162	1788	1	HEB160	S355J2
123A90-FDL-ST-DD-90706	00	CWUAP167	1790	1	PL10x95,2	S275JR
123A90-FDL-ST-DD-90706	00	CWUAP167	1793	1	HEB220	S355J2
123A90-FDL-ST-DD-90706	00	CWUAP168	1790	1	PL10x95,2	S275JR
123A90-FDL-ST-DD-90706	00	CWUAP168	1793	1	HEB220	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP169	1793	1	HEB220	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP170	1793	1	HEB220	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP179	1799	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP180	1800	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP181	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP182	1922	1	IPE160	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90707	01	CWUAP183	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP184	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP185	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP186	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90707	01	CWUAP187	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP188	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP188	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP189	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP189	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP190	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP190	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP191	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP191	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP192	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP192	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP193	1801	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP193	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90708	00	CWUAP194	1802	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP195	1802	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP196	1802	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP197	1803	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP198	1803	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP199	1803	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP200	1803	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP201	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP202	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP203	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP204	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP205	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP206	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP207	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP208	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP209	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP210	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90708	00	CWUAP211	1804	1	IPE160	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90708	00	CWUAP212	1804	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP232	1816	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP233	1817	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP234	1815	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP235	1815	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP236	1816	1	IPE160	S355J2
123A90-FDL-ST-DD-90709	00	CWUAP237	1817	1	IPE160	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP074	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP075	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP076	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP076	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90710	01	CWUAP077	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP077	1918	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90710	01	CWUAP078	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90710	01	CWUAP078	1790	5	PL10x95,2	S275JR
123A90-FDL-ST-DD-90711	00	CWUAP079	1753	1	HEB220	S355J2
123A90-FDL-ST-DD-90711	00	CWUAP079	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90711	00	CWUAP081	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90711	00	CWUAP082	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90711	00	CWUAP082	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90711	00	CWUAP083	1754	1	HEB220	S355J2
123A90-FDL-ST-DD-90711	00	CWUAP083	1790	6	PL10x95,2	S275JR
123A90-FDL-ST-DD-90712	02	CWUAP114	1763	1	HEB220	S355J2
123A90-FDL-ST-DD-90712	02	CWUAP114	1790	4	PL10x95,2	S275JR
123A90-FDL-ST-DD-90712	02	CWUAP115	1763	1	HEB220	S355J2
123A90-FDL-ST-DD-90712	02	CWUAP115	1790	4	PL10x95,2	S275JR
123A90-FDL-ST-DD-90712	02	CWUAP116	1763	1	HEB220	S355J2
123A90-FDL-ST-DD-90712	02	CWUAP116	1790	4	PL10x95,2	S275JR
123A90-FDL-ST-DD-90712	02	CWUAP116	1903	1	HEB220	S355J2
123A90-FDL-ST-DD-90712	02	CWUAP116	1918	1	PL10x95,2	S275JR
123A90-FDL-ST-DD-90712	02	CWUAP116	2035	1	HEB220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP126	1768	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP126	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90713	00	CWUAP127	1768	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP127	1791	2	PL8x42	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
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Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90713	00	CWUAP129	1769	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP131	1770	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP132	1770	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP133	1770	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP134	1770	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP135	1771	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP135	1791	1	PL8x42	S275JR
123A90-FDL-ST-DD-90713	00	CWUAP136	1771	1	IPE220	S355J2
123A90-FDL-ST-DD-90713	00	CWUAP136	1791	1	PL8x42	S275JR
123A90-FDL-ST-DD-90714	01	CWUAP137	1772	1	IPE220	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP137	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90714	01	CWUAP138	1772	1	IPE220	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP138	1791	2	PL8x42	S275JR
123A90-FDL-ST-DD-90714	01	CWUAP176	1797	1	IPE220	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP177	1797	1	IPE220	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP178	1798	1	IPE220	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP216	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP217	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP218	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP219	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP220	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP221	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP222	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90714	01	CWUAP223	1805	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP225	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP226	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP227	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP228	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP229	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP229	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90715	00	CWUAP230	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP230	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90715	00	CWUAP231	1806	1	IPE160	S355J2
123A90-FDL-ST-DD-90715	00	CWUAP231	1825	4	PL6x28,5	S275JR
123A90-FDL-ST-DD-90716	00	CWUAP238	1818	1	IPE160	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
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Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90716	00	CWUAP239	1819	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP240	1819	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP241	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP242	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP243	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP244	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP245	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP246	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP247	1820	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP248	1821	1	IPE160	S355J2
123A90-FDL-ST-DD-90716	00	CWUAP249	1821	1	IPE160	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP084	1832	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP085	1832	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP086	1832	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP087	1832	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP118	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP119	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP120	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP121	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP122	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP123	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP124	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP125	1764	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP171	1794	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP172	1794	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP173	1833	1	HEB220	S355J2
123A90-FDL-ST-DD-90717	00	CWUAP174	1795	1	HEB220	S355J2
123A90-FDL-ST-DD-90718	01	CWUAP088	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90718	01	CWUAP088	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP088	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP089	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90718	01	CWUAP089	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP089	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP090	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90718	01	CWUAP090	1789	1	PL20x280	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90718	01	CWUAP090	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP091	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90718	01	CWUAP091	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90718	01	CWUAP091	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP092	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90719	01	CWUAP092	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP092	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP093	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90719	01	CWUAP093	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP093	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP094	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90719	01	CWUAP094	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP094	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP094	2115	4	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP095	1758	1	HEB220	S355J2
123A90-FDL-ST-DD-90719	01	CWUAP095	1789	1	PL20x280	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP095	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90719	01	CWUAP095	2115	4	PL10x95,2	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP100	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90720	00	CWUAP100	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP100	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP101	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90720	00	CWUAP101	1790	3	PL10x95,2	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP101	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP102	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90720	00	CWUAP102	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP102	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP103	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90720	00	CWUAP103	1790	2	PL10x95,2	S275JR
123A90-FDL-ST-DD-90720	00	CWUAP103	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90721	00	CWUAP104	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90721	00	CWUAP104	1790	1	PL10x95,2	S275JR
123A90-FDL-ST-DD-90721	00	CWUAP104	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90721	00	CWUAP105	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90721	00	CWUAP105	1790	1	PL10x95,2	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
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Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

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123A90-FDL-ST-DD-90721	00	CWUAP105	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90721	00	CWUAP106	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90721	00	CWUAP106	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90721	00	CWUAP107	1760	1	HEB220	S355J2
123A90-FDL-ST-DD-90721	00	CWUAP107	1792	1	PL20x280	S275JR
123A90-FDL-ST-DD-90733	01	CWTPW100	1842	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1845	2	PL8x61	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1846	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1847	2	PL6x70	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1848	2	PL6x70	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1849	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1865	2	PL8x61	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1866	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1867	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1868	4	PL10x125	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1871	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1872	1	UNP220	S355J2
123A90-FDL-ST-DD-90733	01	CWTPW100	1877	1	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90736	01	CWTPW104	1851	1	UNP220	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1852	2	PL6x70	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1853	2	PL6x70	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1857	1	UNP220	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1862	1	UNP220	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1863	4	PL10x110	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1873	1	UNP220	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1874	1	UNP220	S355J2
123A90-FDL-ST-DD-90736	01	CWTPW104	1877	11	GRATING STEP 30x300	S235JR
123A90-FDL-ST-DD-90736	01	CWTPW104	1878	1	UNP220	S355J2
123A90-FDL-ST-DD-90744	01	CWUAP117	1903	1	HEB220	S355J2
123A90-FDL-ST-DD-90744	01	CWUAP117	1918	5	PL10x95,2	S275JR
123A90-FDL-ST-DD-90744	01	CWUAP117	2035	1	HEB220	S355J2
123A90-FDL-ST-DD-90744	01	CWUAP128	1916	1	IPE220	S355J2
123A90-FDL-ST-DD-90744	01	CWUAP128	1919	3	PL8x42	S275JR
123A90-FDL-ST-DD-90744	01	CWUAP130	1905	1	IPE220	S355J2
123A90-FDL-ST-DD-90744	01	CWUAP139	1906	1	IPE220	S355J2

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
Job	**123A90 - Deck**
Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
RosettiDoc.Num.	**123A90MTR001-A**

DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90744	01	CWUAP139	1919	1	PL8x42	S275JR
123A90-FDL-ST-DD-90745	00	CWUAP140	1907	1	IPE220	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP141	1908	1	IPE220	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP141	1919	1	PL8x42	S275JR
123A90-FDL-ST-DD-90745	00	CWUAP175	1909	1	IPE220	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP213	1917	1	IPE160	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP214	1917	1	IPE160	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP215	1917	1	IPE160	S355J2
123A90-FDL-ST-DD-90745	00	CWUAP224	1917	1	IPE160	S355J2
123A90-FDL-ST-DD-90746	00	CWUAP250	1918	1	PL10x95,2	S275JR
123A90-FDL-ST-DD-90746	00	CWUAP250	1920	1	HEB220	S355J2
123A90-FDL-ST-DD-90746	00	CWUAP251	1913	1	IPE220	S355J2
123A90-FDL-ST-DD-90746	00	CWUAP252	1914	1	IPE160	S355J2
123A90-FDL-ST-DD-90746	00	CWUAP253	1915	1	IPE160	S355J2
123A90-FDL-ST-DD-90747	00	CWTPH017	1925	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH017	1926	1	PL8x150	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH017	1927	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH017	1928	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH017	1929	2	PL5x42	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH017	1930	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH017	1931	2	PL10x140	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH017	1932	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH017	1933	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH018	1929	2	PL5x42	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH018	1931	2	PL10x140	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH018	1932	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH018	1933	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH018	1934	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90747	00	CWTPH018	1935	1	PL8x150	S275JR
123A90-FDL-ST-DD-90747	00	CWTPH018	1936	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH019	1929	2	PL5x42	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH019	1932	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH019	1933	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH019	1954	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH019	1955	2	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
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Discipline	**STRUCTURE**
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DwgNumber	Rev.	Mark	pos.	Q.ty	Description	Material
123A90-FDL-ST-DD-90748	00	CWTPH019	1956	2	PL10x70	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH019	1957	1	PL8x150	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH020	1929	2	PL5x42	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH020	1932	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH020	1949	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH020	1950	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH020	1951	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH020	1952	1	PL8x150	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH020	1953	2	PL10x89	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1929	2	PL5x42	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1956	2	PL10x70	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1968	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90748	00	CWTPH021	1969	1	PL8x150	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1970	1	PL8x149,1	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1971	2	PL8x40	S275JR
123A90-FDL-ST-DD-90748	00	CWTPH021	1976	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH022	1937	1	PL8x150	S275JR
123A90-FDL-ST-DD-90749	00	CWTPH022	1972	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH022	1975	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH022	1977	1	PL10x110	S275JR
123A90-FDL-ST-DD-90749	00	CWTPH022	1978	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH022	1979	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH022	1980	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH023	1937	1	PL8x150	S275JR
123A90-FDL-ST-DD-90749	00	CWTPH023	1972	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH023	1973	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH023	1974	3	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH023	1975	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90749	00	CWTPH023	1977	1	PL10x110	S275JR
123A90-FDL-ST-DD-90750	00	CWTPH024	1938	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1939	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1940	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1941	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1942	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1943	1	PD48,3X3,68	API5LGRB

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
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Discipline	**STRUCTURE**
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123A90-FDL-ST-DD-90750	00	CWTPH024	1944	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1945	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1946	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1947	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH024	1948	1	PL8x150	S275JR
123A90-FDL-ST-DD-90750	00	CWTPH025	1958	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1959	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1960	2	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1961	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1962	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1963	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1964	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1965	1	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1966	4	PD48,3X3,68	API5LGRB
123A90-FDL-ST-DD-90750	00	CWTPH025	1967	1	PL8x150	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG019	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG020	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG021	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG022	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG023	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG024	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG025	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG026	2033	1	PL5x346,9	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG027	2034	1	PL5x360,3	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG028	2034	1	PL5x360,3	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG029	2034	1	PL5x360,3	S275JR
123A90-FDL-ST-DD-90757	00	CWTPSG030	2034	1	PL5x360,3	S275JR
123A90-FDL-ST-DD-90761	01	CWCF001	2016	2	PL700x174,6	RUBBER
123A90-FDL-ST-DD-90768	00	CWTPG001	2037	2	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2038	7	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2039	1	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2040	1	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2041	2	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2042	2	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90768	00	CWTPG001	2044	6	ROD40	S275JR

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
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Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
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123A90-FDL-ST-DD-90768	00	CWTPG001	2045	3	ROD35	BRONZE
123A90-FDL-ST-DD-90768	00	CWTPG001	2046	1	ROD8	S275JR
123A90-FDL-ST-DD-90768	00	CWTPG001	2047	1	PLATE8x70	S275JR
123A90-FDL-ST-DD-90768	00	CWTPG001	2056	4	PL8x91	S275JR
123A90-FDL-ST-DD-90768	00	CWTPG001	2059	2	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2048	1	Ø60,3x5,54	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2049	1	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2050	1	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2051	1	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2052	1	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2053	1	Ø33,4x4,55	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2054	5	ROD20	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2055	5	ROD20	API5LGRB
123A90-FDL-ST-DD-90769	00	CWTPG002	2057	1	PL8x92,3	S275JR
123A90-FDL-ST-DD-90773	00	CWTPMD001	2082	2	PL16x45,1	A516GR,70
123A90-FDL-ST-DD-90773	00	CWTPMD001	2083	2	PL40x120	A516GR,70
123A90-FDL-ST-DD-90773	00	CWTPMD001	2084	1	ROD60	A36
123A90-FDL-ST-DD-90773	00	CWTPMD001	2085	1	PL30x80	A516GR,70
123A90-FDL-ST-DD-90773	00	CWTPMD001	2087	1	Ø609,6x12	API5LX52
123A90-FDL-ST-DD-90773	00	CWTPMD001	2088	1	D15	A36
123A90-FDL-ST-DD-90773	00	CWTPMD001	2089	1	PL25x90	A516GR,70
123A90-FDL-ST-DD-90774	01	CWCF003	2099	1	Ø334,6x313,74x152	Polyurethane
123A90-FDL-ST-DD-90774	01	CWCF003	2104	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90774	01	CWCF003	2105	1	Ø334,6x437x40,7	Polyurethane
123A90-FDL-ST-DD-90774	01	CWCF003	2106	1	Ø658x151,2	Polyurethane
123A90-FDL-ST-DD-90774	01	CWCF003	2107	1	Ø658x355,6x14	Polyurethane
123A90-FDL-ST-DD-90774	01	CWCF003	2110	1	PL60x150	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90774	01	CWCF003	2111	1	D15	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90774	01	CWCF003	2112	1	PL10x35	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90774	01	CWCF003	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90775	01	CWCF004	2099	1	Ø334,6x313,74x152	Polyurethane
123A90-FDL-ST-DD-90775	01	CWCF004	2104	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90775	01	CWCF004	2105	1	Ø334,6x437x40,7	Polyurethane
123A90-FDL-ST-DD-90775	01	CWCF004	2106	1	Ø658x151,2	Polyurethane
123A90-FDL-ST-DD-90775	01	CWCF004	2107	1	Ø658x355,6x14	Polyurethane

Empolyer/Contractor	**CROSSWIND**
SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
Project	**Hollandse Kust Noord Wind Park Project**
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Discipline	**STRUCTURE**
DocumentTitle	**Structural Material Category 5**
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123A90-FDL-ST-DD-90775	01	CWCF004	2110	1	PL60x150	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90775	01	CWCF004	2111	1	D15	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90775	01	CWCF004	2112	1	PL10x35	EN1,4462DUPLEX SS
123A90-FDL-ST-DD-90775	01	CWCF004	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90776	01	CWCF005	2097	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90776	01	CWCF005	2098	1	Ø334,6x437x40,7	Polyurethane
123A90-FDL-ST-DD-90776	01	CWCF005	2099	1	Ø334,6x313,74x152	Polyurethane
123A90-FDL-ST-DD-90776	01	CWCF005	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90777	01	CWCF006	2097	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90777	01	CWCF006	2098	1	Ø334,6x437x40,7	Polyurethane
123A90-FDL-ST-DD-90777	01	CWCF006	2099	1	Ø334,6x313,74x152	Polyurethane
123A90-FDL-ST-DD-90777	01	CWCF006	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90778	01	CWCF007	2100	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90778	01	CWCF007	2101	1	Ø332,1x437x40,7	Polyurethane
123A90-FDL-ST-DD-90778	01	CWCF007	2102	1	Ø332,1x293,6x132	Polyurethane
123A90-FDL-ST-DD-90778	01	CWCF007	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90779	01	CWCF008	2100	1	Ø437x40,7	Polyurethane
123A90-FDL-ST-DD-90779	01	CWCF008	2101	1	Ø332,1x437x40,7	Polyurethane
123A90-FDL-ST-DD-90779	01	CWCF008	2102	1	Ø332,1x293,6x132	Polyurethane
123A90-FDL-ST-DD-90779	01	CWCF008	2148	1	ROD30	S355J2
123A90-FDL-ST-DD-90782	00	CWUAP254	2114	1	HEB220	S355J2
123A90-FDL-ST-DD-90782	00	CWUAP255	2114	1	HEB220	S355J2
123A90-FDL-ST-DD-90785	00	CWUG027	2190	1	PL20x150	Neoprene
123A90-FDL-ST-DD-90786	00	CWUG028	2190	1	PL20x150	Neoprene
123A90-FDL-ST-DD-90787	00	CWUG029	2190	1	PL20x150	Neoprene
123A90-FDL-ST-DD-90788	00	CWUG030	2190	1	PL20x150	Neoprene
123A90-FDL-ST-DD-90847	00	CWGSCF003	2225	1	50X300	WOOD
123A90-FDL-ST-DD-90847	00	CWGSCF004	2225	1	50X300	WOOD
123A90-FDL-ST-DD-90848	00	CWGSCF005	2225	1	50X300	WOOD
123A90-FDL-ST-DD-90848	00	CWGSCF010	2225	1	50X300	WOOD
123A90-FDL-ST-DD-90849	00	CWGSCF006	2226	1	50X420	WOOD
123A90-FDL-ST-DD-90849	00	CWGSCF006	2227	2	50X200	WOOD
123A90-FDL-ST-DD-90850	00	CWGSCF007	2226	1	50X420	WOOD
123A90-FDL-ST-DD-90850	00	CWGSCF007	2227	2	50X200	WOOD
123A90-FDL-ST-DD-90851	00	CWGSCF008	2226	1	50X420	WOOD

CROSSWIND ROSETTI MARINO	Empolyer/Contractor	**CROSSWIND**
	SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**
	Project	**Hollandse Kust Noord Wind Park Project**
	Job	**123A90 - Deck**
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123A90-FDL-ST-DD-90851	00	CWGSCF008	2227	2	50X200	WOOD
123A90-FDL-ST-DD-90852	00	CWGSCF009	2226	1	50X420	WOOD
123A90-FDL-ST-DD-90852	00	CWGSCF009	2227	2	50X200	WOOD